USER MANUAL

Version 1.1

CDR 0410VE

CDR 0410VDE / CDR 0820VDE / CDR 1620VDE

DIGITAL VIDEO RECORDERS

Picture: CDR 1620VDE

To obtain the best performance and ensure device functions correctly, please read this User Manual carefully and completely.

FCC Compliance

USER-INSTALLER CAUTION: YOUR AUTHORITY TO OPERATE THIS FCC VERIFIED EQUIPMENT COULD BE VOIDED IF YOU MAKE CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE TO PART 15 OF THE FCC RULES.

NOTE: THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS.

OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

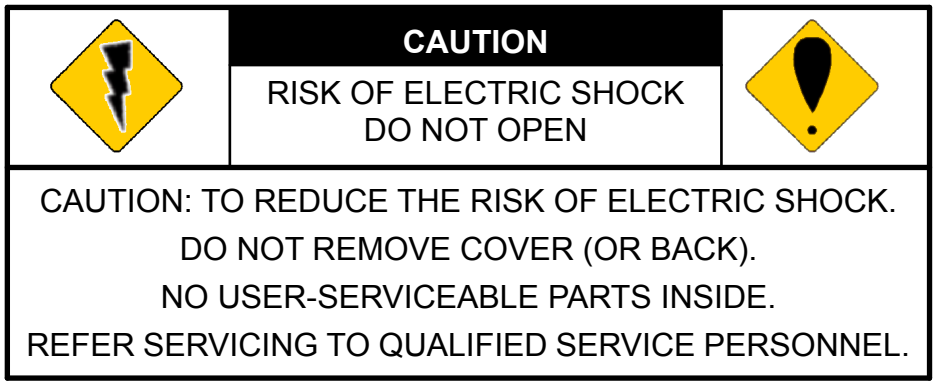
THIS CLASS A DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.

WARNINGS, CAUTIONS & COPYRIGHT

WARINGS

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.
DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

CAUTION


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Explanation of Graphical Symbols

	The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of insinuated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
	The exclamation point within an equilateral rhombus is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the product.

USERS OF THE SYSTEM ARE RESPONSIBLE FOR CHECKING AND COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND STATUTES CONCERNING THE MONITORING AND RECORDING OF VIDEO AND AUDIO SIGNALS. CAPTURE AND ASSOCIATED COMPANIES SHALL NOT BE HELD RESPONSIBLE FOR THE USE OF THIS SYSTEM IN VIOLATION OF CURRENT LAWS AND STATUTES.

COPYRIGHT

THE TRADEMARKS MENTIONED IN THE MANUAL ARE LEGALLY REGISTERED TO THEIR RESPECTIVE COMPANIES.

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1 INTRODUCTION

1.1 FEATURES

- H.264 video compression.
- 200 PPS (PAL) / 240 PPS (NTSC) or 100 PPS (PAL) / 120 PPS (NTSC)*
- Recording quality/ rate adjustment per channel available*.
- User friendly Central Management System (CMS)
- 3GPP.
- Audio Backup / Audio Streaming.
- Graphic User Interface (GUI).
- Support time-point backup function under Ethernet remote control mode.
- Support time-search & event-search function under Ethernet remote control mode.
- Up to four online clients for independent remote control; individual live-time, play-back & time-search function available. CMS uses 2 online client capacity
- Support PPPoE/ Static/ DHCP IP & DDNS.
- Multiplex operation
- ID function supplied from IR remote controller. User can control different DVRs at the same time by using one IR remote controller.

* Check in the parameter setup for more details

1.2 SPECIFICATIONS

Model No.	CDR 0410VE	CDR 0410VDE	CDR 0820VDE	CDR 1620VDE
MODE	Multiplex			
VIDEO				
DISPLAY RESOLUTION	NTSC:720*480 PAL:720*576	NTSC:720*480 PAL:720*576	NTSC:720*480 PAL:720*576	NTSC:720*480 PAL:720*576
DISPLAY RATE (Frame / Sec)	NTSC: 04 x 30 PAL: 04 x 25	NTSC: 04 x 30 PAL: 04 x 25	NTSC: 08 x 30 PAL: 08 x 25	NTSC: 16 x 30 PAL: 16 x 25
SPLIT SCREEN	1, 4	1, 4	1, 4, 8, 9	1, 4, 9, 13, 16
VIDEO INPUT	BNC x 04	BNC x 04	BNC x 08	BNC x 16
VIDEO LOOPING	NO	BNC x 04	BNC x 08	BNC x 16
VIDEO OUTPUT (BNC)	1	2	1	1
VIDEO OUTPUT (SPOT MONITOR)	NONE	NONE	BNC x 1	BNC x 1
VIDEO OUTPUT (S-VIDEO)	NONE	1	1	1
VIDEO OUTPUT (VGA)	1	1	1	1
Audio				
AUDIO INPUT (RCA)	1	1	1	1
AUDIO OUTPUT	RCA x 1	RCA x 1	RCA x 1	RCA x 1
AUDIO BACKUP	Yes	Yes	Yes	Yes
AUDIO STREAMING	Yes	Yes	Yes	Yes
VIDEO RECORDING				
COMPRESSION TYPE	H.264			
RECORDING RESOLUTION	NTSC: 720 x 480 / PAL: 720 x 576 NTSC: 720 x 240 / PAL: 720 x 288 NTSC: 360 x 240 / PAL: 360x288			
RECORDING RATE (D1)	NTSC: 720 x 480 up to 30 PPS PAL: 720 x 576 up to 25 PPS		NTSC: 720 x 480 up to 60 PPS PAL: 720 x 576 up to 50 PPS	
RECORDING RATE (HALF D1)	NTSC: 720 x 240 up to 60 PPS PAL: 720 x 288 up to 50 PPS		NTSC: 720 x 240 up to 120 PPS PAL: 720 x 288 up to 100 PPS	
RECORDING RATE(CIF)	NTSC: 360x240 up to 120 PPS PAL: 360x288 up to 100 PPS		NTSC: 360 x 240 up to 240 PPS PAL: 360 x 288 up to 200 PPS	
RECORDING MODE	Manual / Schedule(Continuous/Alarm/No Rec)			

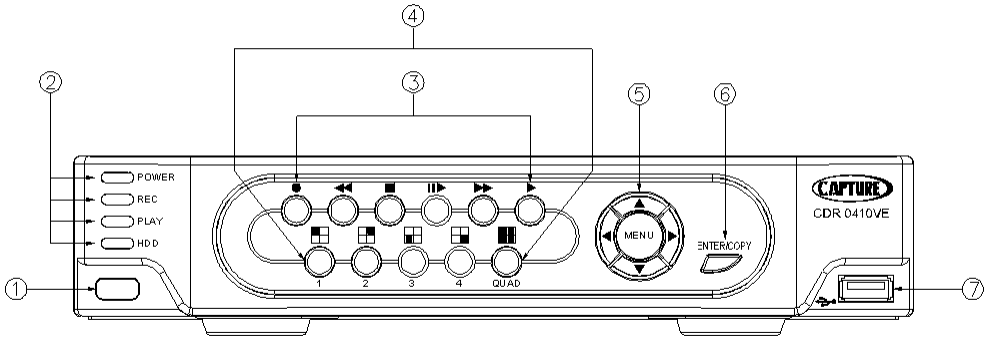
PLAYBACK				
PLAYBACK SPEED	Fast Forward: X 2 X 4 X 8 Fast Backward: X 2 X 4 X 8 Image by Image / Pause			
TIME SEARCH	Yes			
EVENT SEARCH	Yes			
EVENT LIST	3000 records per H.D.D (Maximum)			
OSD & CONTROL INTERFACE				
TITLE	8 Characters			
ON SCREEN DISPLAY & SETUP	Time / Date / Setup Menu			
GRAPHIC USER INTERFACE (GUI)	Yes			
DVR CONTROL FRONT PANEL	Yes			
MOUSE	Yes			
IR REMOTE CONTROLLER	Yes			
3D / 2D Controller (Keyboard Controller)	Yes (Optional)			
IE BROWSER support	Yes			
File PLAYER	Yes			
STORAGE & BACKUP DEVICE				
INTERNAL HDD SUPPORT	SATA HDD x 1	SATA HDD x 2		
USB BACKUP	Yes			
DVD RW BACKUP	NO	Yes : DVD-RW		
NETWORK				
ETHERNET	Yes			
ETHERNET COMPRESSION FORMAT	H.264			
DDNS	Yes			
E-MAIL & FTP	Yes			
NETWORK IP	Static/ Dynamic/ PPPoE			
MULTI-REMOTE CLIENT	Yes (4 Online Clients MAX), CMS will consume 2 client capacity			
3GPP	Yes (MPEG-4)			
ALARM				
ALARM INPUT	4 In (NO/ NC)	4 In (NO/ NC)	8 In (NO/ NC)	16 In (NO/ NC)
ALARM OUTPUT	1 Out (NO/ NC)	**1 Out (NO/ NC)**	1 Out (NO/ NC)	**1 Out (NO/ NC)**
MOTION DETECTION	Yes			

MOTION DETECTION AREA	30 (h) x 24 (v) grids			
MOTION DETECTION SENSITIVITY	1 ~ 99			
VIDEO LOSS DETECTION	Yes			
ALARM RECORDING	Yes			
BUZZER	Yes			
SETUP & OTHER FUNCTIONS				
DAYLIGHT SAVING TIME	Yes			
PTZ CONTROL	Yes			
RS-232	NO	NO	Yes	Yes
RS-485 / RS-422	Yes/NO	Yes/NO	Yes	Yes
DIGITAL ZOOM	Yes			
PASSWORD CONTROL	Three levels, one for system, one for HDD format and the other for Network Password.			
KEY-LOCK	Yes			
MULTI-LANGUAGE	11 Languages			
FIRMWARE UPDATE	USB Host & Remote Update			
OTHERS				
POWER INPUT	DC 12V			
POWER CONSUMPTION (Watts)	12W (w/o HDD) 21W (w/1 HDD)	15W (w/o HDD) 30W (w/ 2 HDD)	24W (w/o HDD) 40W (w/ 2 HDD)	
DIMENSIONS (W x H x D) mm	230 x 44 x 215	360 x 60 x 311	430 x 88 x 382	
WEIGHT NET (kg)	1.4(w/o HDD)	3.0 (w/o HDD)	7.0 (w/o HDD)	
OPERATION TEMP	0°C ~ +40°C			

***SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE**

2 HARDWARE OVERVIEW

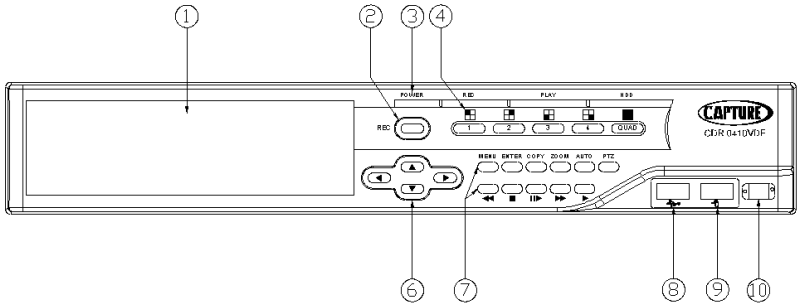
2.1 FRONT PANEL



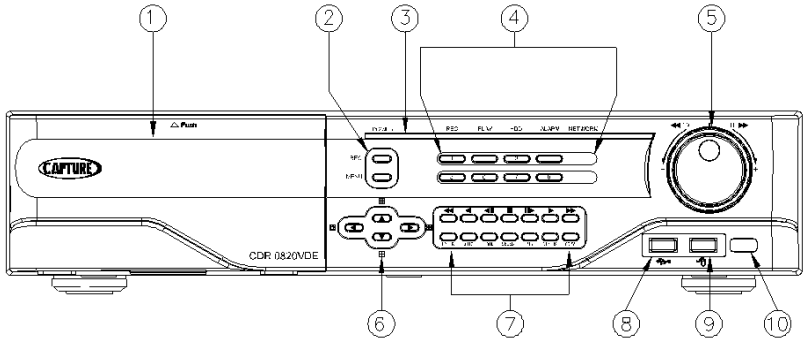
CDR 0410VE

DVR OPERATION

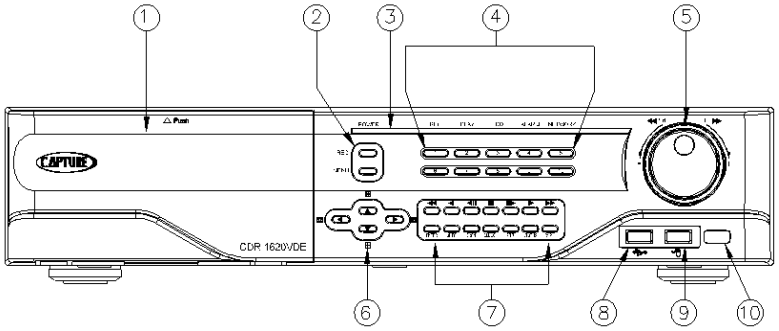
NO.	LABEL	OPERATION	PTZ
1		IR Sensor For Remote Control.	
2	**LED REC**	Led Indicator	
3	**CONTROL PANEL**	Record, Playback And Control Button.	
4	**1-4 & Quad**	Press the Button to Display No.1~No.4 Camera Images on Full Screen and Quad for Multi Channel Screen	
5	**▲▼◄► & MENU**	Button Of Controller. Button Of Menu Screen	UP, DOWN, LEFT & RIGHT
6	**ENTER &COPY**	Enter and Copy Button	
7		USB Connector.	



CDR 0410VDE

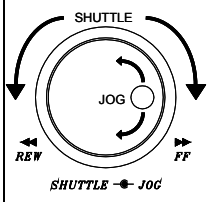


CDR 0820VDE



CDR 1620VDE

DVR OPERATION

NO.	LABEL	OPERATION	PTZ
1	DVD RW	Slot for DVD RW.	
2	REC & MENU	Button for Recording and Menu Setup.	
3	LED	Led Indicator	
4	1-10	Press to display full screen per channel.	
5	SHUTTLE & JOG	 Shuttle: Fast Forward ×2 ×4 ×8 Fast Backward ×2 ×4 ×8 Jog: Picture By Picture Playback	
6	▲▼◄►	Button Of Controller. Button Of Switching Channel.	UP, DOWN, LEFT &

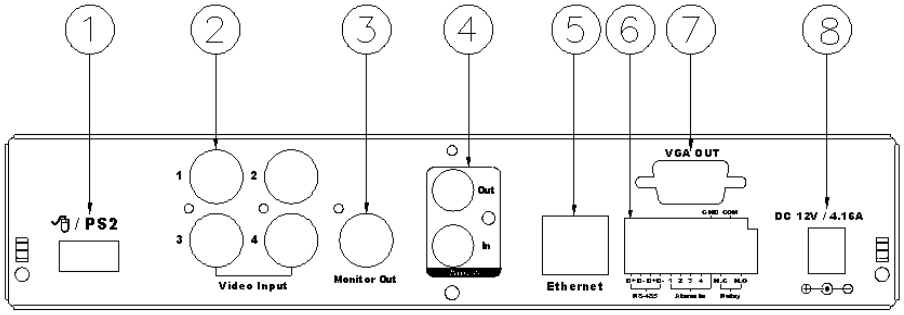
			RIGHT
7	**CONTROL PANEL**	Record, Playback And Control Button.	
8		USB Connector.	
9		Port for USB Mouse (Use only mouse supplied in the package).	
10		IR Sensor For Remote Control.	

Note: 1. User can select camera by using the channel keys on DVR front panel. ***For example, user can press "+10" key and then press "6" key to see the 16th channel image.***

2. Under the Full and 16 split screen condition, press SELECT button to switch AUDIO ON/OFF.

3. Please plug in the supplied mouse to DVR mouse connector before turning ON the DVR. DO NOT REMOVE and PLUG IN the mouse, while DVR is operating.

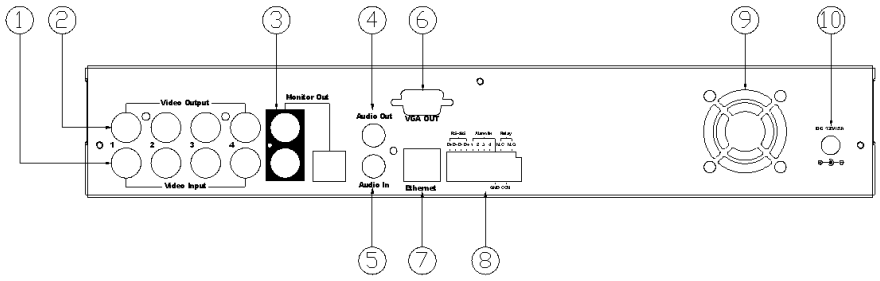
2.2 BACK PANEL



CDR 0410VE

DVR OPERATION

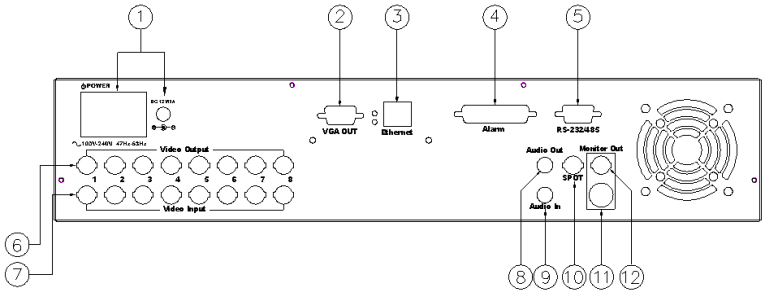
NO.	LABEL	OPERATION
1		USB Mouse (Use only mouse supplied in the package).
2	**VIDEO INPUT**	Video input with BNC connector.
3	**MONITOR OUT**	Video output with BNC connector.
4	**AUDIO OUT/ IN**	Audio output/ input.
5	**ETHERNET**	RJ-45 connector for network.
6	**RS-485/ ALARM/ RELAY**	4 pin connector for external control unit, 5 pin connector for Alarm input and 3 pin connector for relay
7	**VGA D-SUB OUT**	Connect to Computer Monitor or LCD Monitor.
8	**POWER**	Power switcher: DC 12V 5A / 50-60 Hz input.



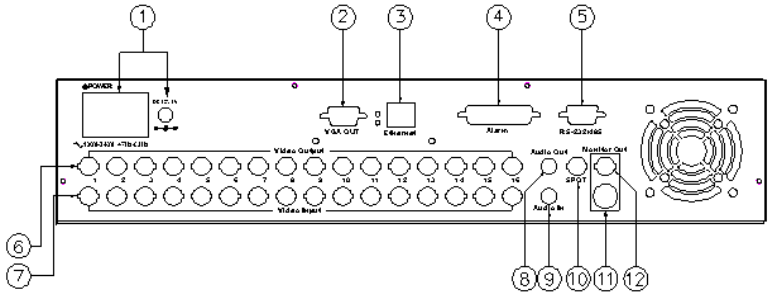
CDR 0410VDE

NO.	LABEL	OPERATION
1	**VIDEO INPUT**	Video input with BNC connector.
2	**VIDEO OUTPUT**	Video output with BNC connector.
3	**MONITOR OUT**	Video output with BNC and S-Video connector.
4	**AUDIO OUT**	Audio output connector
5	**AUDIO IN**	Audio input connector
6	**VGA D-SUB OUT**	Connect to Computer Monitor or LCD Monitor.

7	**ETHERNET**	RJ-45 connector for network.
8	**RS-485/ ALARM/ RELAY**	4 pin connector for external control unit, 5 pin connector for Alarm input and 3 pin connector for relay
9	**FAN**	Cooling fan.
10	**POWER**	Power Connector: DC 12V 5A / 50-60 Hz input.



CDR 0820VDE



CDR 1620VDE

NO.	LABEL	OPERATION
1	**POWER**	Power switcher: DC 12V/ 5A input.
2	**VGA D-SUB OUT**	Connect to Computer Monitor or LCD Monitor.
3	**ETHERNET**	RJ-45 connector for network.
4	**ALARM**	25 pin D-Sub connector for Alarm input / output.
5	**RS-232 / RS-485**	9 pin D-Sub connector for external control unit.
6	**VIDEO OUTPUT**	Video output with BNC connector.
7	**VIDEO INPUT**	Video input with BNC connector.
8	**AUDIO OUT**	Audio output connector
9	**AUDIO IN**	Audio input connector
10	**SPOT**	SPOT video output.
11	**MONITOR OUT**	Video output with S-Video connector.
12	**MONITOR OUT**	Video output with BNC connector.

2.3 ADVANCED AUTO SWITCH ZOOM, PTZ, COPY KEY CONTROL & USB INFORMATION

AUTO SWITCH : In the split screen mode, use the AUTO/SEQ key in the front panel to enable auto switch function. To disable press AUTO/SEQ key again.

ZOOM : In the full screen mode, use ZOOM button on the front panel to perform ZOOM function. Press ▲▼◄►, located on the front panel to move the zoom window.

PTZ : When camera supported PTZ function ,use PTZ button, located on the front panel, to perform PTZ function. Press ▲▼◄► to select and change setup value. Moreover, under the Quad Mode, press ►► button on the front panel will lead to sequence mode and in Single Full Screen mode, press ►► button on the front panel will enter to PTZ control. Press ►► button again will come out from PTZ control. (Only in **CDR 0410VE**)

COPY : Within the playback mode, press COPY button to start backup record and press "COPY" again to end backup. Minimum backup time 10sec.

Note: Add 10sec backup time to beginning of desired backup copy time towards process time

2.4 CAMERA & MONITOR LOOPING

Here recommend link cameras by sequence to avoid unexpected image broken, from CH1, CH2, CH3, CH4…….

2.5 ALARM

There are three types of alarms, that the system can be configured to handle. They are Motion detection Alarm, External Alarm and Video Loss Alarm.

A. Motion detection Alarm and External Alarm:

When Motion detection or External Alarm is triggered, 5 possible actions can be performed.

a. Changes recording speed as alarm recording speed.
b. Monitor will display corresponding full screen alarm channel, it will switch automatic mode to manual mode if buttons pressing activity occurred in 5 seconds.
c. Relays can be activated by motion detection or external alarm .
d. External alarm will be recorded in the event list. Motion detection can be set to yes or no.
e. The camera title will change to yellow when motion is triggered and display icon too, icon will show up when external alarm is triggered.

B. Video Loss Alarm:

When Video Loss occurs, the icon will display. To remove icon, press/click on any channel. Icon cannot be removed remotely.

C.25 PIN D-Sub Interface connector is used for external alarm input. The alarm input accepts **voltage free contact devices.**

Alarm input pins : 1~16 to one side of the trigger devices contacts and the other side to ground pins 20 or 21.

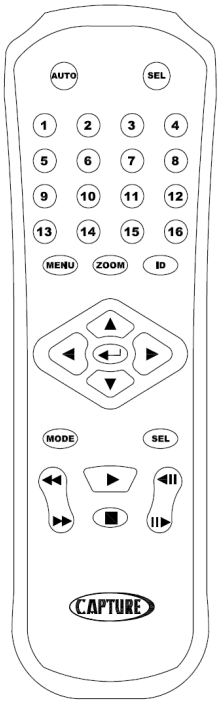
The connectors pin 22 connected to Alarm Reset. The Alarm Reset signal return connects to ground pin (pin 20-21).

Alarm output is Relay Type, Pin 24 is Normal Close (N.C.) and Pin 25 is Normal Open (N.O.) .These outputs can be used to control external devices.

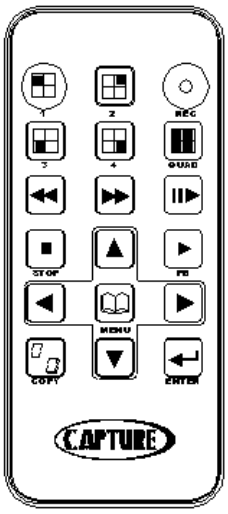
D-SUB 25 PIN Interface Card Configuration	
1-16	Alarm Input Terminals
17-19	N/A
20, 21	GND (Connecting to Ground, Alarm Input)
22	Alarm Reset
23	Relay COM (Alarm Output)
24	Alarm output, N.C.
25	Alarm output, N.O.

Note:If any alarm is configured/ enabled, DVR will start recording as per the Alarm Recording frame rate.

2.6 IR REMOTE CONTROL



Remote Controller for CDR 0410VDE/ CDR 0820VDE/ CDR 1620VDE



Remote Controller for CDR 0410VE

ITEM	
AUTO/SEQ	Press AUTO/SEQ to activate sequence display of channels
REC	Press REC to start recording and press again for stop recording.
1-16	Press the button to select the channel for full screen.
MENU	To enter or exit main menu page
ZOOM	First select single channel, press zoom to activate function.
ID	**ID setup to control DVR's
▲	Switch split screen & Move upward or increase.
►	Switch split screen & Move right or increase.
▼	Switch split screen & Move downward or decrease.
◄	Switch split screen & Move left or decrease.
↵	To enter item.
MODE	Split Screen Switch
SEL	Press this button to select the different assembled of camera formats or perform PTZ functions. Moreover, under the 16 split screen and full screen modes, press this button for switching Audio ON/ OFF.
◄◄	Fast backward
◄II	Picture by picture backward play
►	Play video forward
►►	Fast forward
II►	Picture by picture forward play
	CHANNEL 1 (Only in CDR 0410VE Remote Controller)
	CHANNEL 2 (Only in CDR 0410VE Remote Controller)
	CHANNEL 3 (Only in CDR 0410VE Remote Controller)
	CHANNEL 4 (Only in CDR 0410VE Remote Controller)
	Quad Mode (Only in CDR 0410VE Remote Controller)
	Copy (Only in CDR 0410VE Remote Controller)
■	Stop REC and Playback

****Each DVR can setup its own ID number. User can control DVR via remote controller by pressing ID button first and then ID number of DVR and ID button again of remote controller.**

For example, if DVR is set to 1, the user has to press ID on the remote controller (ID button) followed by 1 on the key pad, finally press ID to save.

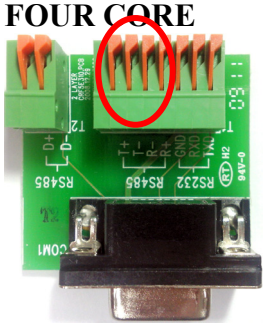
****Click ID button first and then number 99 and ID button again to control multi-DVR(s) at the same time.**

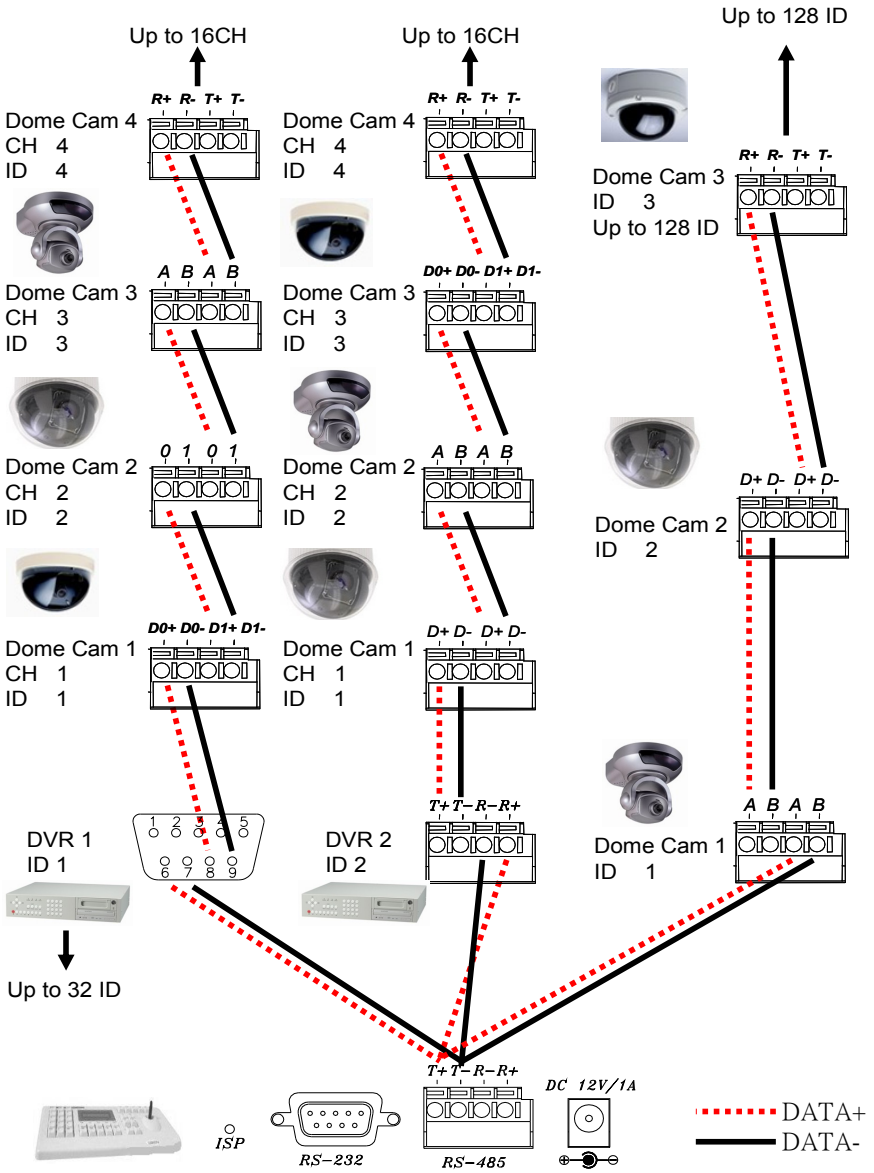
2.7 PTZ (PAN, TILT AND ZOOM) CAMERA

DVR can connect between PTZ camera and joystick controller. For DVR to control PTZ camera, please make sure the CAMERA ID, PROTOCOL, BAUDRATE (default is 9600 bps) and RS-485 cable. Moreover, there are two connecting methods of RS-485 cable. The two sorts of connection diagrams are shown in the following.

Note: Only used in 16CH & 8CH models

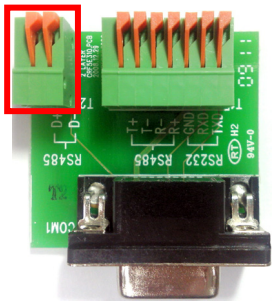
FOUR CORE

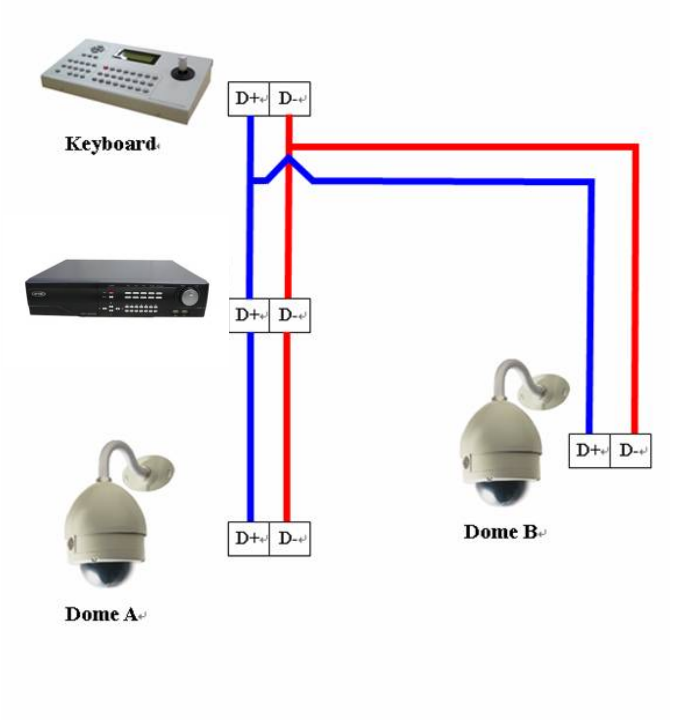




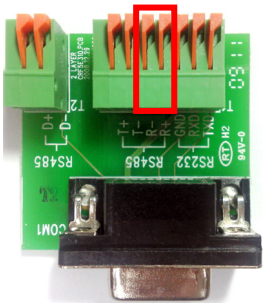
TWO CORE

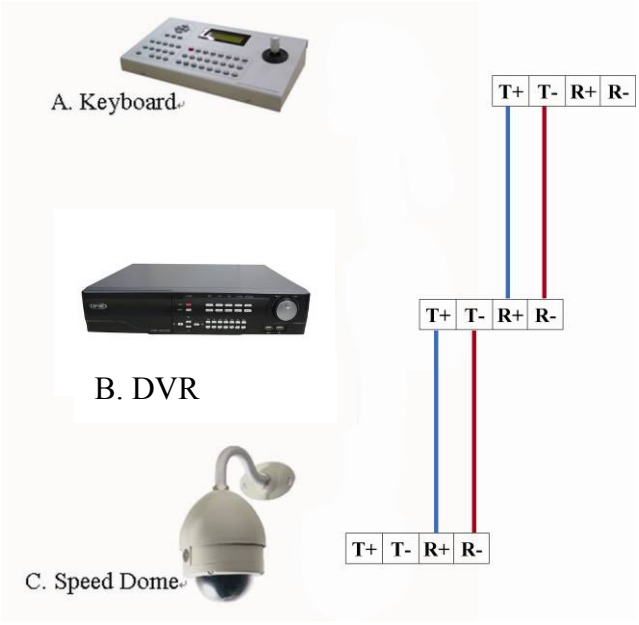
RS485: D+/D-





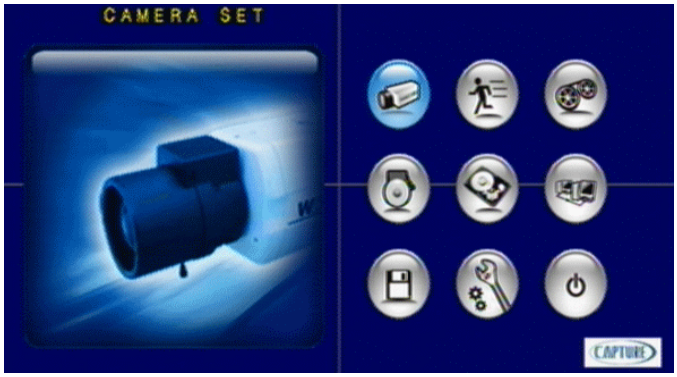
RS485: R+/R-





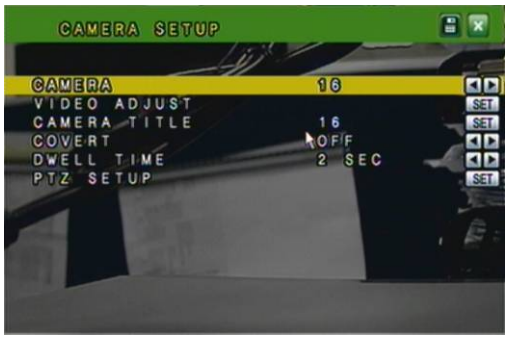
3 SYSTEM SETUP

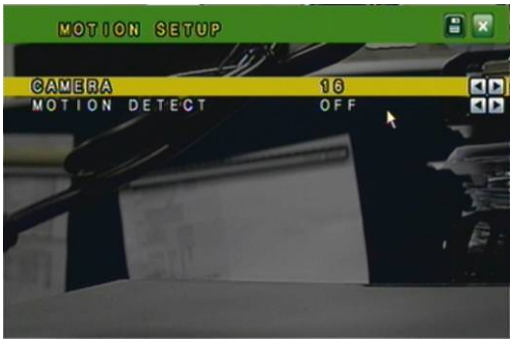
3.1 MENU SETUP INTERFACE(GUI)



A. CAMERA SET

B. MOTION SETUP

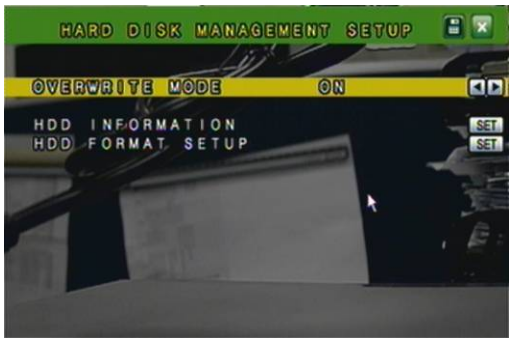




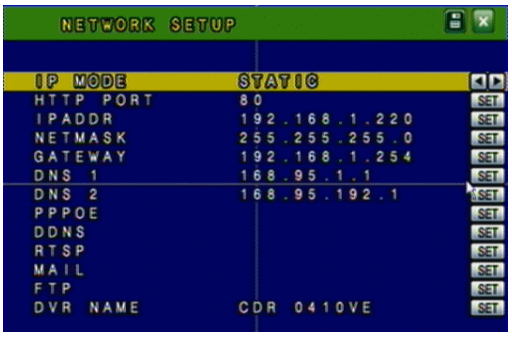
C. RECORD SETUP

D. ALARM SETUP

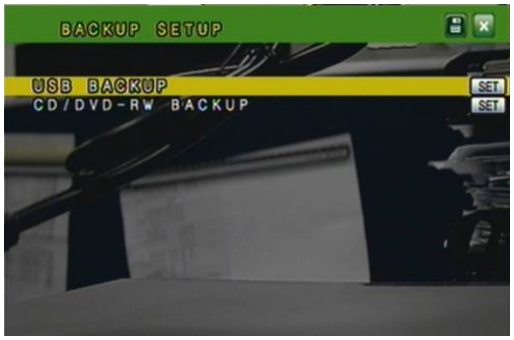
E. HARD DISK MANAGEMENT SETUP



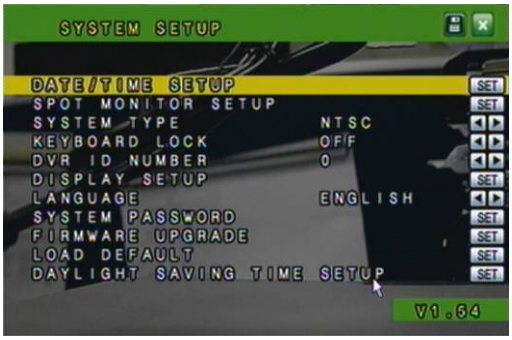
F. NETWORK SETUP



G. BACKUP SETUP*



H. SYSTEM SETUP



* CD/DVD-RW BACKUP option not available in CDR-0410VE
* Only DVD Can be used in DVD RW drives not CD's

3.2 LIVE VIEWING AND POP-UP MENU

NOTE : The pop-up menu can be activated by moving the mouse cruise to the bottom of the live viewing screen.

A. **GUI MENU BAR**

With live viewing mode, press this icon to get into the GUI menu.

B. **DISK INFORMATION**

With live viewing mode, press this icon to display disk information.

C. **DIGITAL ZOOM**

In the live full screen mode, left-click the button of the mouse to pull a range to zoom in or zoom out the image and right-click the button of the mouse to disable this function. (NOTE: Using the mouse to operate digital zoom can zoom in to max. 16 times.) Moreover, user can also use ZOOM key on the front panel to perform this function. (First, click ZOOM Key and then click ▲▼◄► key to select zoom in or zoom out position. Finally, click ENTER key to complete the setting. Moreover, click ZOOM key again can disable digital zoom function. Using the panel key to perform zoom in function is fixed at 2 times.)

D. **PTZ CONTROLLER**

Within live-viewing mode, click this button to get into the PTZ setup menu. User can also use PTZ key on the front panel to perform this function. Moreover, user can right-click the button of the mouse or press the PTZ key on the front panel again to exit PTZ Setup.

NOTE： Only for camera's supporting PTZ function from DVR.

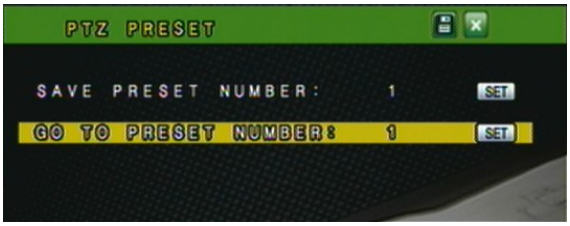
PTZ CONTROL

Direction key

Zoom In/ Zoom Out

PTZ Preset

Press button to entry PTZ preset point menu.

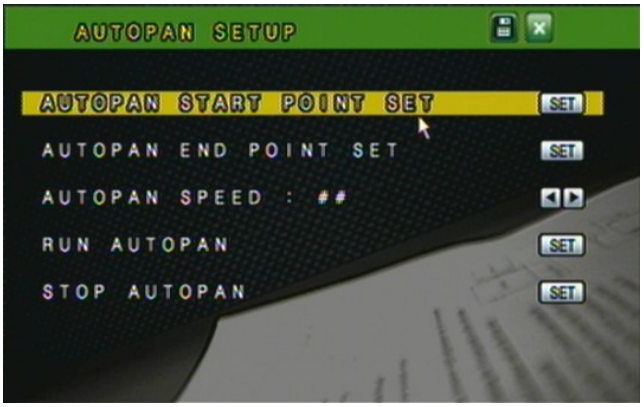


SAVE PRESET NUMBER: Press **SET** to save preset point number and its position.
GO TO PRESET NUMBER: Press **SET** to go to the setup preset point number position.

Note: Above is only possible if the connected PTZ Camera allows this mode of activation from DVR

AUTOPAN Setup

Press button to entry AUTOPAN setup menu.



AUTOPAN START POINT SET: Press **SET** to save the start point of AUTOPAN.
AUTOPAN END POINT SET: Press **SET** to save the end point of AUTOPAN .
AUTOPAN SPEED: Press the ◄ or ►/ mouse wheel to change the autopan speed.
RUN AUTOPAN: Press **SET** to start AUTOPAN.
STOP AUTOPAN: Press **SET** to stop AUTOPAN.

AUTOPAN Setup Procedure:

1. Enter PTZ Control Window.
2. Move PTZ speed dome to desired scene to setup AUTOPAN START POINT.
3. Press "AUTO" icon to enter AUTOPAN SETUP.
4. Press the SET icon, this will save the AUTOPAN START POINT.
5. Exit by pressing either icons.
6. Move PTZ speed dome to desired scene to setup AUTOPAN END POINT.
7. Press "AUTO" icon to enter AUTOPAN SETUP.
8. Press the SET icon, this will save the AUTOPAN END POINT.
9. Adjust desired AUTOPAN SPEED using the icons.

At this point the AUTOPAN setup is complete.

Note: Above is only possible if the connected PTZ Camera allows this mode of activation from DVR

PTZ SETUP

ID: Use the mouse wheel to change speed dome camera ID.
LEFT-RIGHT SPEED: Use the mouse wheel to change the left-right speed.
UP-DOWN SPEED: Use the mouse wheel to change the up-down speed.
AUTO SPEED: Use the mouse wheel to change the auto patrol speed.
BAUD RATE: Use the mouse wheel to change the BAUD rate.
PROTOCOL: Use the mouse wheel to change the connection protocol

Note: Above is only possible if the connected PTZ Camera allows this mode of activation from DVR

E. **AUDIO CONTROL**

Press this button to turn the audio on or off

F. **DISPLAY CONTROL**

Within live-viewing or playback mode, use display control to switch the camera channel.

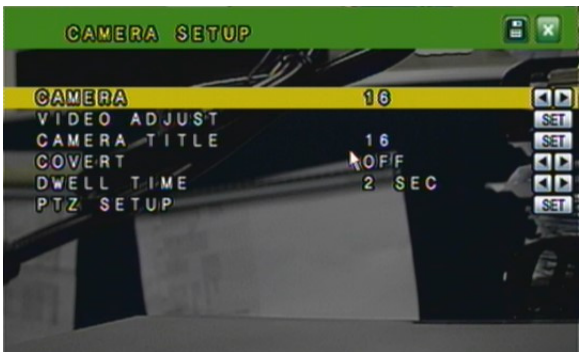
G. **RECORD AND PLAYBACK CONTROL**

Same as front panel controller and remote controller.

NOTE: Display the type of the event as follows.

POWER	If the DVR got power loss, it will record the date and time of **rebooting only.**
RECORD	If **REC.** button has been pressed, it will record the date and time in the event list.
V.LOSS	When a camera signal is lost, it will record the date, time, and channel number. Moreover, the icon will display on the corresponding channel.
ALARM	When ALARM is triggered, it will record the date, time, and channel number. Moreover, the icon will display on the corresponding channel.
MOTION	When MOTION is detected, it will record the date, time, and corresponding channel. Moreover, the icon will display on the corresponding channel.

3.3 CAMERA SETUP



Press ▲ or ▼ to select items.
Press ◄ or ► to change values.
Press SET to see more options.

A. CAMERA

Press ◄ or ►/ mouse wheel to switch channels.

B. VIDEO ADJUST

B-1. CONTRAST

Press ◄ or ►/ mouse wheel to change contrast level.

B-2. BRIGHTNESS

Press ◄ or ►/ mouse wheel to change brightness level.

B-3. HUE

Press ◄ or ►/ mouse wheel to change HUE level.

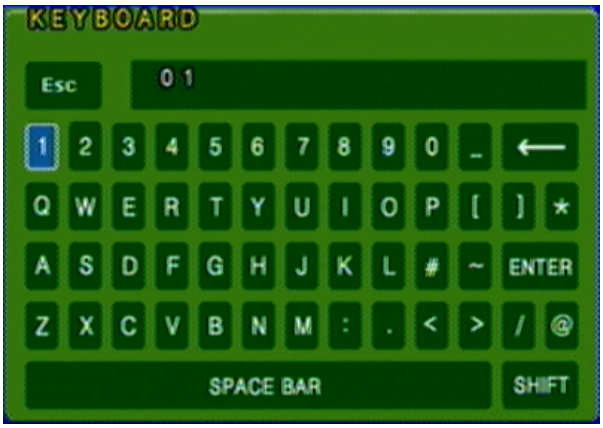
B-4. COLOR

Press ◄ or ►/ mouse wheel to change color level.

B-5. SHAPRNESS

Press ◄ or ►/ mouse wheel to change sharpness level.

C. CAMERA TITLE



Use mouse to select and change character.

D. COVERT

Press ◄ or ► / mouse wheel to change value for the corresponding camera would be displayed on the screen or not.

E. DWELL TIME

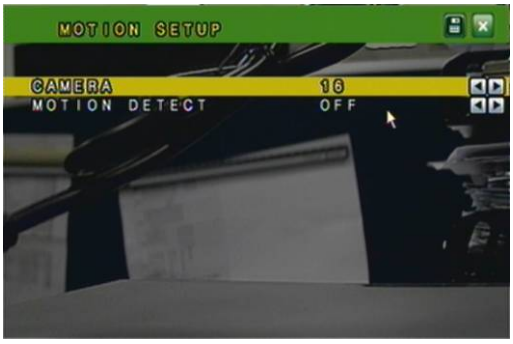
Press ◄ or ►/ mouse wheel to ON/OFF auto switch and the switch sec.

F. PTZ SETUP

ID: Use the mouse wheel to change speed dome camera ID.
LEFT-RIGHT SPEED: Use the mouse wheel to change the left-right speed.
UP-DOWN SPEED: Use the mouse wheel to change the up-down speed.
AUTO SPEED: Use the mouse wheel to change the auto patrol speed.
BAUD RATE: Use the mouse wheel to change the BAUD rate
PROTOCOL: Use the mouse wheel to change the connection protocol.

Note: Above is only possibleto functiononly if the connected PTZ Camera allows this mode of activation from DVR

3.4 MOTION SETUP



Press ▲ or ▼ to select items.
Press ◄ or ► to change values.
Press SET to see more options.

A. CAMERA

Press ◄ or ►/ mouse wheel to switch channels.

B. MOTION DETECT

Press ◄ or ►/ mouse wheel to change value for motion detect function.

C. SENSITIVITY

Press ◄ or ►/ mouse wheel to change sensitivity value from 001 (minimum) to 100 (maximum).

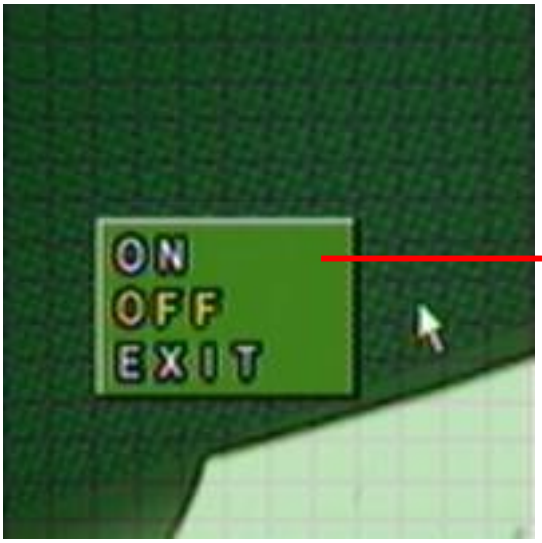
D. AREA SETUP

1. Press SET to enter Motion Area Setting. (**Note: The default setting of all area is "MOTION ON".)**

2. Use the mouse to select which block is needed.

The green area shows the area without motion detection.

3. Left-Click the mouse to see more options or exit the setup.



ON: Activate by removing green shaded area.
OFF: Disable by highlighting green shaded area.
EXIT: Exit the motion detection setup grid.

3.5 RECORD SETUP

Press ▲ or ▼ to select items.
Press ◄ or ► to change values.
Press SET to see more options.

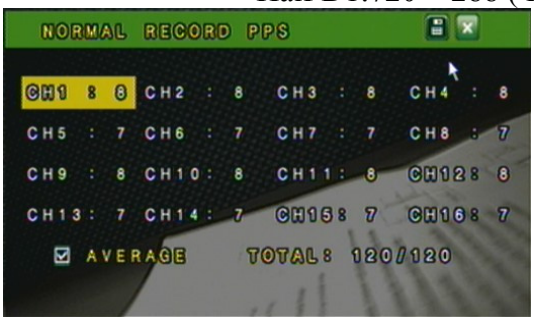
A. RESOLUTION

Press ◄ or ►/ mouse wheel to switch record resolution.
Full D1: 720 x 576 (PAL)/ 720 x 480 (NTSC)
Half D1: 720 x 288 (PAL) / 720 x 240 (NTSC)
CIF: 360 x 288 (PAL) / 360 x 240 (NTSC)

B. NORMAL RECORD PPS

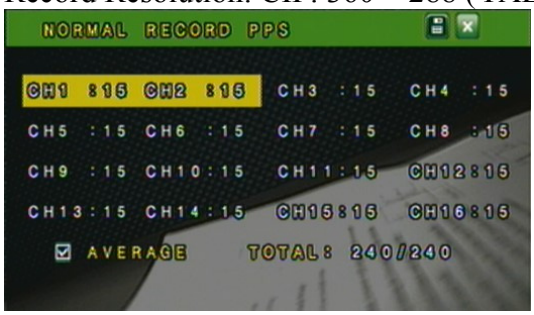
Press SET to change the PPS in normal recording. Click "AVERAGE" to set PPS automatically by system or change the PPS for each channel manually.

Record Resolution: Full D1: 720 x 576 (PAL)/ 720 x 480 (NTSC)
Half D1:720 × 288 (PAL) / 720 × 240 (NTSC)


NORMAL RECORD PPS
CH1 : 8 CH2 : 8 CH3 : 8 CH4 : 8
CH5 : 7 CH6 : 7 CH7 : 7 CH8 : 7
CH9 : 8 CH10 : 8 CH11 : 8 CH12 : 8
CH13 : 7 CH14 : 7 CH15 : 7 CH16 : 7
AVERAGE TOTAL : 120/120

Note: *In Half D1 and D1 mode, parameters can be set/changed individually for all cameras*

Record Resolution: CIF: 360 × 288 (PAL) / 360 × 240 (NTSC)



Note: *When recording resolution selected is CIF, parameters can be set/changed for 2 cameras (factory defined) together only.*

C. ALARM RECORD PPS

Press **SET** to change the PPS in alarm recording. Click "AVERAGE" to set PPS automatically by system or change the PPS for each channel manually.

Record Resolution: Full D1: 720 x 576 (PAL)/ 720 x 480 (NTSC)
Half D1:720 × 240 (NTSC) / 720 × 288 (PAL)

ALARM RECORD PPS
CH1 :10 CH2 :10 CH3 :10 CH4 :10
CH5 :10 CH6 :10 CH7 :10 CH8 : 0
CH9 :10 CH10:10 CH11:10 CH12:10
CH13:10 CH14: 0 CH15: 0 CH16: 0
AVERAGE TOTAL: 120/120

Note: *In Half D1 and D1 mode, parameters can be set/changed individually for all cameras*

Record Resolution: CIF: 360 × 240 (NTSC) / 360 × 288 (PAL)

Note: *When recording resolution selected is CIF, parameters can be set/changed for 2 cameras (factory defined) together only.*

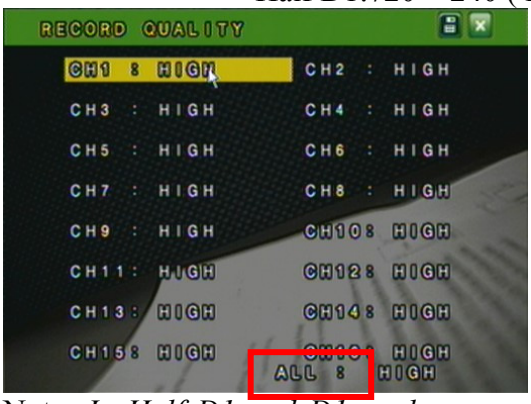
D. ALARM RECORD DURATION

Press ◄ or ► to set dwell time of alarm recording.

E. RECORD QUALITY

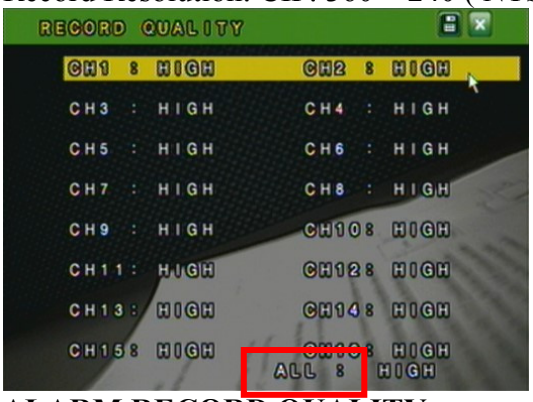
Press **SET** to switch image quality of each channel (720 x 576 (PAL)/ 720 x 480 (NTSC)) and (720 × 240 (NTSC) / 720 × 288 (PAL)) or each two channels (360 × 240 (NTSC) / 360 × 288 (PAL)). Use mouse wheel to change the image quality of each channel: LOW/ MEDIUM/ HIGH/ BEST, or use "ALL" to switch the image quality of all channels at once.

Record Resolution: Full D1: 720 x 576 (PAL)/ 720 x 480 (NTSC)
Half D1:720 × 240 (NTSC) / 720 × 288 (PAL)



Note: *In Half D1 and D1 mode, parameters can be set/changed individually for all cameras*

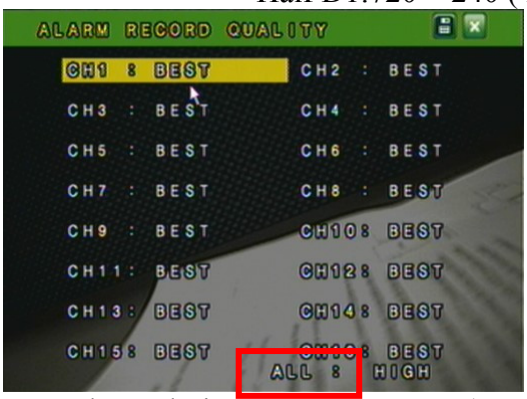
Record Resolution: CIF: 360 × 240 (NTSC) / 360 × 288 (PAL)



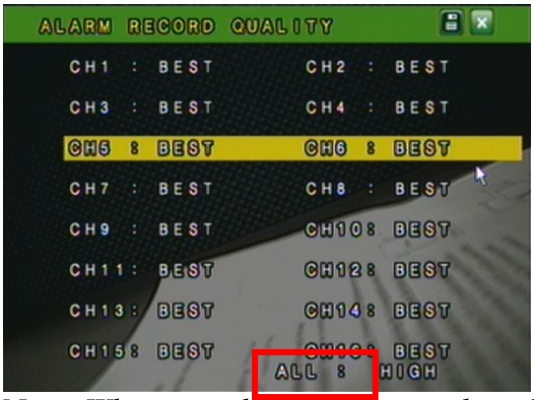
F. ALARM RECORD QUALITY

Press **SET** to switch alarm record quality of each channel (720 x 576 (PAL)/ 720 x 480 (NTSC)) and (720 × 240 (NTSC) / 720 × 288 (PAL)) or each two channels (360 × 240 (NTSC) / 360 × 288 (PAL)). Use mouse wheel to change the image quality of each channel: LOW/ MEDIUM/ HIGH/ BEST, or use "ALL" to switch the image quality of all channels at once.

Record Resolution: Full D1: 720 x 576 (PAL)/ 720 x 480 (NTSC)
Half D1:720 × 240 (NTSC) / 720 × 288 (PAL)



Record Resolution: CIF: 360 × 240 (NTSC) / 360 × 288 (PAL)



Note: *When recording resolution selected is CIF, parameters can be set/changed for 2 cameras (factory defined) together only.*

G. RECORD MODE

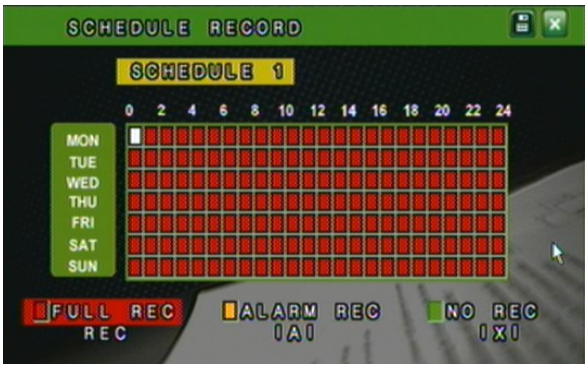
Press ◄ or ► to switch record mode to MANUAL/ SCHEDULE 1/ SCHEDULE 2/ SCHEDULE 3/ SCHEDULE 4/ SCHEDULE 5.

H. AUDIO RECORD

Press ◄ or ► to switch AUDIO RECORD ON or OFF.

I. SCHEDULE SETUP

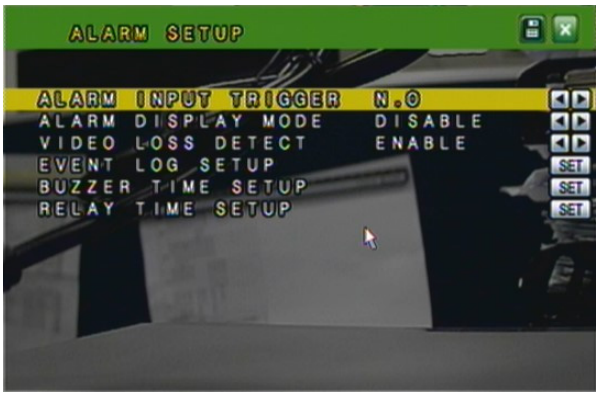
Press **SET** to get into schedule setup menu.



1. Use mouse to select schedule record by using FULL REC., ALARM REC and NO REC three modes.

2. Click to save change and exit.

3.6 ALARM SETUP



Press ▲ or ▼ to select items.
Press ◄ or ► to change values.
Press SET to see more options.

A. ALARM INPUT TRIGGER
Select N.C for "normal close" alarm input, or select N.O for "normal open" alarm input.

B. ALARM DISPLAY MODE
Press ◄ or ►/ mouse wheel to change value for ALARM DISPLAY MODE with full screen.

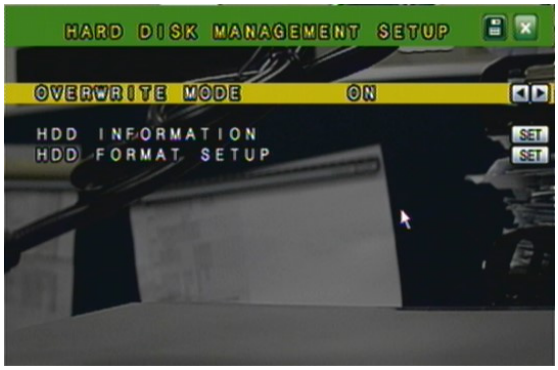
C. VIDEO LOSS DETECT
Press ◄ or ►/ mouse wheel to switch VIDEO LOSS ALARM ON or OFF.

D. EVENT LOG SETUP
Press **SET** to change value for MOTION EVENT / VIDEO LOSS EVENT to ON / OFF.

E. BUZZER TIME SETUP
Press **SET** to set dwell time of BUZZER/ ALARM.

F. RELAY TIME SETUP
Press **SET** to set dwell time of RELAY.

3.7 HARD DISK MANAGEMENT SETUP



Press ▲ or ▼ to select items.
Press ◄ or ► to change values.
Press SET to see more options.

A. OVERWRITE MODE
Press ◄ or ► to change the value of OVERWRITE MODE in ON or OFF.

B. CAPACITY WARNING (When Overwrite Mode is OFF, Capacity Warning will enable)
Press ◄ or ► to change value to 20/ 15/ 10 or 5% with non-overwrite mode. When LEFT RATIO is below the setting, the buzzer will be activated.

C. HDD INFORMATION

Press SET to display/view HDD information.

D. HDD FORMAT SETUP

D-1. HDD PASSWORD PROTECT

Press ◄ or ►/ mouse wheel to change value for hard disk format password protection.

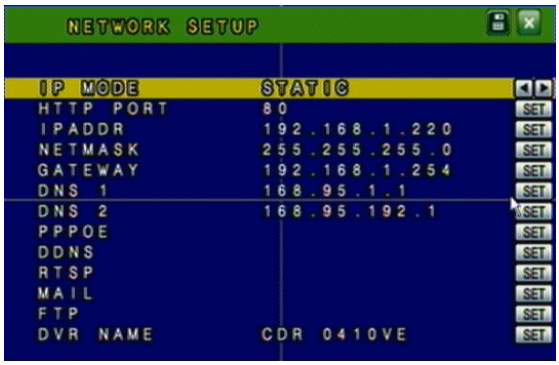
D-2. HDD PASSWORD SETUP

Press **SET** then use mouse to change password.
Default password： 1111

D-3. HDD FORMAT

Press **SET** to get into FORMAT setup.
Press YES to execute or NO to exit without formatting.

3.8 NETWORK SETUP



Press ▲ or ▼ to select items.
Press ◄ or ► to change values.
Press SET to see more options.

A. IP MODE

Press ▲ or ▼ to select items and ◄ or ►/ mouse wheel to change to STATIC IP or DHCP.

B. HTTP PORT

Press ▲ or ▼ to select items and ◄ or ►/ mouse wheel to change WEB PAGE PORT. *Default Port set is 80.*

C. IP ADDR

Press ▲ or ▼ to select items and **SET** to change IP ADDRESS.

D. NETMASK

Press ▲ or ▼ to select items and **SET** to change SUBNET MASK.

E. GATEWAY

Press ▲ or ▼ to select items and **SET** to change Default GATEWAY.

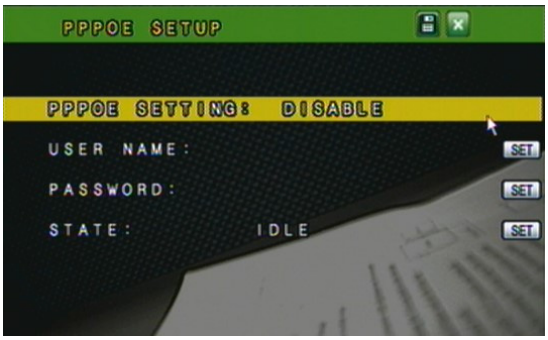
F. DNS1

Press ▲ or ▼ to select items and **SET** to change DNS 1.

G. DNS2

Press ▲ or ▼ to select items and **SET** to change DNS 2.

H. PPPoE



H-1. PPPoE SETTING

Press◄ or ►/ mouse wheel to ENABLE / DISABLE PPPoE.

H-2. USER NAME

Use mouse to setup user name for ADSL account.

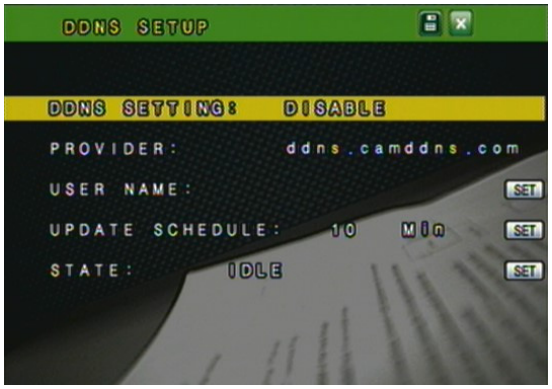
H-3. PASSWORD

Use mouse to setup password for ADSL account.

H-4. STATE

Press SET to display status of PPPoE。

I. DDNS SETUP



I-1. DDNS SETTING：Press◄ or ►/ mouse wheel to set DDNS ENABLE / DISABLE.

I-2. PROVIDER：Press◄ or ►/ mouse wheel to select DDNS provider.

I-3. USER NAME：Press **SET** to setup user name.

I-4. UPDATE SCHEDULE： Use **SET** to dwell time of updating schedule.

I-5. STATE：Press **SET** to display status of DDNS。

J. RTSP SETUP

J-1. RTSP PORT: Press **SET** to setup RTSP port. The default value is 554.

J-2. RTP START PORT: Press **SET** to setup RTP start port. The default value is 1024.

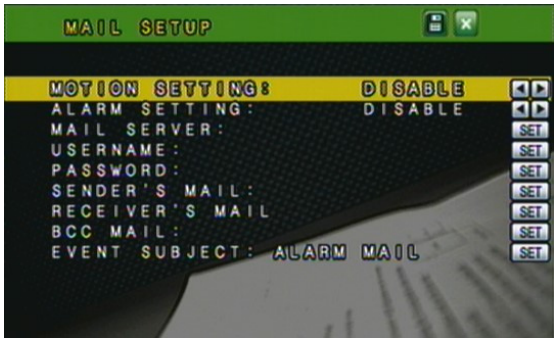
J-3. RTP END PORT: Press **SET** to setup RTP end port. The default value is 10000.

J-4. VIDEO QUALITY: Press◄ or ►/ mouse wheel to select video quality. There are BEST, HIGH, STANDARD, MEDIUM & LOW ; five options.

Note: RTP END Port Setting: Each channel requires 4 ports.
Example: 16CH x 4 (port) = 64

RTP Start Port: 1024
RTP End Port: 1088

K. MAIL SETUP



K-1. MOTION SETTING: Press◄ or ►/ mouse wheel to enable or disable motion setting.

K-2. ALARM SETTING: Press◄ or ►/ mouse wheel to enable or disable alarm setting.

K-3. MAIL SERVER: Press **SET** to fill in the IP address of Mail Server.

K-4. USERNAME: Press **SET** to fill in the username while login to the mail server.

K-5. PASSWORD: Press **SET** to fill in the password while login to the mail server.

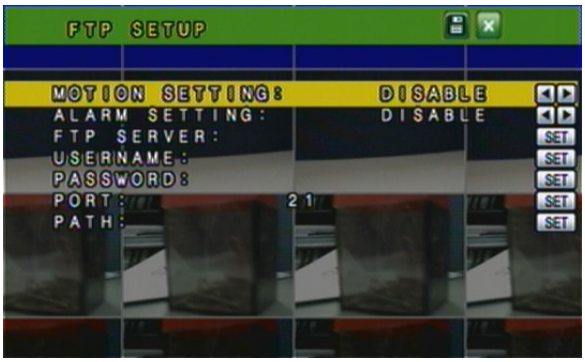
K-6. SENDER'S MAIL: Press **SET** to fill in the sender's account when send the mail via this mail server.

K-7. RECEIVER'S MAIL: Press **SET** to fill in the receiver's mail address.

K-8. BCC MAIL: Press **SET** to fill in the receiver's mail address for Bcc Mail.

K-9. EVENT SUBJECT: The subject of this mail. (Default value is ALARM MAIL)

L. FTP SETUP



L-1. MOTION SETTING: Press◄ or ►/ mouse wheel to enable or disable motion setting.

L-2. ALARM SETTING: Press◄ or ►/ mouse wheel to enable or disable alarm setting.

L-3. FTP SERVER: Press **SET** to fill in the IP address of FTP Server.

L-4. USERNAME: Press **SET** to fill in the username while login to FTP.

L-5. PASSWORD: Press **SET** to fill in the password while login to FTP.

L-6. PORT: Press **SET** to fill in the port number. The default value is 21.

L-7. PATH: Press **SET** to fill in the path when using FTP.

M. DVR NAME

Press **SET** to change DVR name which will present via using IP Installer, Internet and DVR CMS.

3.9 BACKUP SETUP

NOTE: *For function stability, Ethernet remote control function (IE) will be stopped when processing backup function.
***USB DEVICE BACKUP : 3.2MB/ per sec.**

A. USB BACKUP

Due to each USB device with different USB driver ICs, their compatibilities will differ. This system is compatible with most of USB flash memory. If there is compatible issue, please refer to **APPENDIX B**. In addition, please format USB flash memory with FAT32.

There are three types of USB Backup.

1) One Touch Backup Video
2) Snap Shot Backup
3) Video Time Select backup

BEFORE BACKUP

A. In live viewing mode, insert USB device into a USB port of the DVR.
B. Get into playback mode by PLAY TIME SEARCH or EVENT LIST SEARCH and play back videos that are going to be as backup.

1) One Touch BACKUP VIDEO

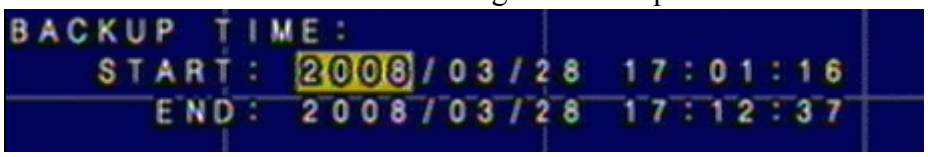
In multiplexer (multi display) or single camera screen mode, press icon from Shortcut toolbar, to start video backup and press during backup to end backup.

2) Snap Shot BACKUP

In single camera screen mode, press PAUSE or icons and then press icon. The system will backup in JPEG and .Y42 file format.

3) USB BACKUP MENU - VIDEO TIME SELECT

- User can use the mouse wheel to change the backup Start/ End time。



- Click to start backup, the total process will be shown on screen.

BACKUP FILE NAME
Each backup file will be named as START TIME.
EXAMPLE: 174624.264 is 17:46:24

AFTER BACKUP

After complete the backup, the system will copy " PLAYER06" automatically on USB device for playing the backup file.

Remove the USB only after 2 Sec of DVR displaying "Backup OK", which denotes end of backup.

B. CD/DVD BACKUP (not applicable for CDR 0410VE)

BEFORE BACKUP

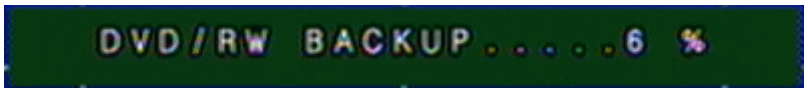
Please insert a blank CD or DVD into the CD or DVD /RW respectively.

Note: Backup can be taken only on DVD RW not on CD while using DVR with Inbuilt DVD RW.

CD DVD R/W BACKUP MENU

- User can use the mouse wheel to change the backup Start/ End time.

- Click to start backup.



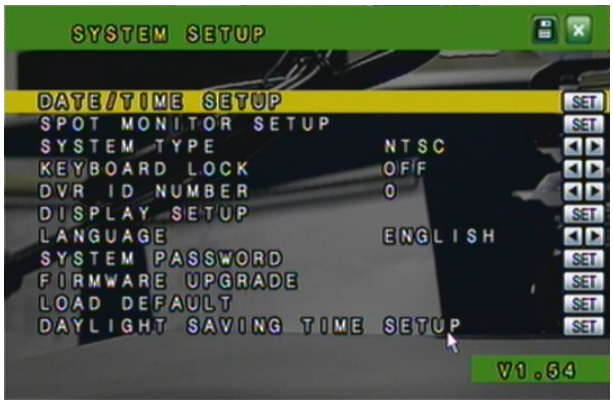
BACKUP FILE NAME

Each backup file will be named as START TIME.
EXAMPLE: 12231008.264 is December 23rd 10:08

AFTER BACKUP

After complete the backup, the system will copy " Player06" automatically on the disc for playing the backup file.

3.10 SYSTEM SETUP



Press ▲ or ▼ to select items.
Press ◄ or ► to change values.
Press SET to see more options.

A. DATE / TIME SETUP

Press **SET** to set DATE / TIME.

A-1. TIME

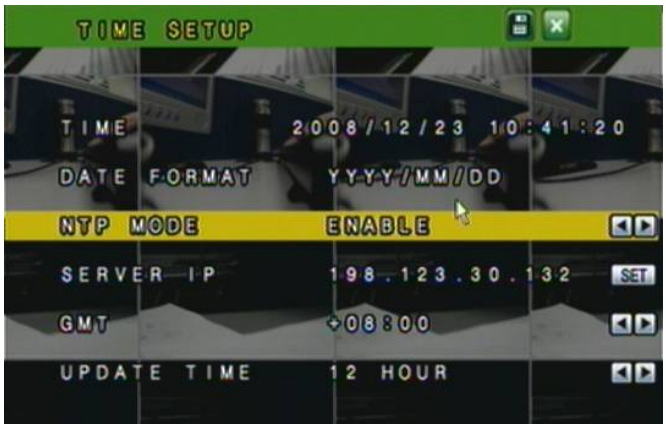
Use mouse wheel to change DATE/ TIME.

A-2. DATE FORMAT

Use mouse wheel to change DATE. There are DD/MM/YYYY, YYYY/MM/DD and MM/DD/YYYY three modes.

A-3. NTP MODE

Use mouse wheel to change NTP. When NTP is enable, use **SET** to change SERVER IP and use ◄ or ►/ mouse wheel to change GMT and UPDATE TIME.



B. SPOT MONITOR SETUP

There are FULL SWITCH, QUAD SWITCH and OFF options for spot monitor display.

FULL SWITCH MODE

QUAD SWITCH MODE

Also set the time frame after which the switching will happen between windows.

C. SYSTEM TYPE

Press ◄ or ►/ mouse wheel to change the system type.

D. KEYBOARD LOCK

Press ◄ or ►/ mouse wheel to switch ON/ OFF. There are OFF, TYPE 1 and TYPE 2 three options.

OFF：NO Password protection.

TYPE 1： User can operate menu function only. While pressing MENU, the password keyboard will pop-up. Enter the password to take access; default password is 1111.

TYPE 2： User can operate all functions and shortcuts. For MENU, REC ON/ OFF and PLAYBACK password need to be entered. All other keys/ functions can be access without password.

After KEYBOARD LOCK mode setup, please set up password thru SYSTEM PASSWORD SETUP. Enable password protection here and save your password with the help of Virtual keyboard.

If KEYBOARD Lock is OFF and SYSTEM PASSWORD SETUP is disabled, un-authorized users could access the configuration and make changes.

E. ID NUMBER

Press ◄ or ►/ mouse wheel to change values.

ID NUMBER is set to define/differentiate between DVR's, while using same IR Remote Control for multiple DVR's.

F. DISPLAY SETUP

Press SET to ENABLE or DISABLE display of CAMERA TITLE / DVR STATUS / DATE / TIME.

G. LANGUAGE

Press ◄ or ► to change on-screen-display (OSD) language.

H. SYSTEM PASSWORD

Press ▲ or ▼ to select items and ◄ or ► to change values.

Enable the system password under this option and set the password you wish to use for the DVR. Default password: 1111. Pls don't misplace your password.

If system password is misplaced, pls inform your dealer and send the DVR to the factory for necessary action.

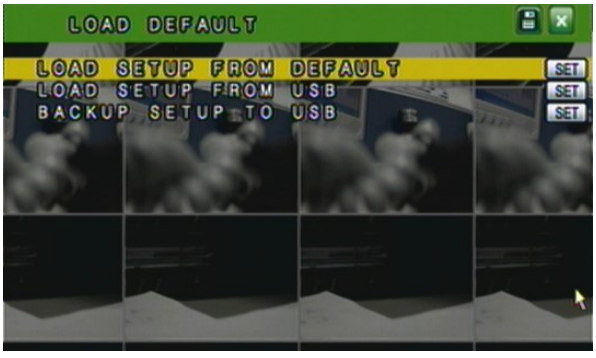
I. FIRMWARE UPDATE

Insert USB Flash memory with new firmware, to the USB port of the DVR. At the Firmware Update window, press **YES** to start firmware update. After updated, the DVR will reboot automatically. During this process make sure the DVR is **not** turned off or powered off

NOTE: 1. Please format USB flash memory with FAT32.
2. For function stability, we suggest user to STOP recording function before processing firmware update function.

J. LOAD DEFAULT

Press **SET** button to entry LOAD DEFAULT screen. There are LOAD SETUP FROM DEFAULT, LOAD SETUP FROM USB and BACKUP SETUP TO USB options in this functional set.



J-1. LOAD SETUP FROM DEFAULT: Press **SET** button to load the setting back to factory default.

J-2. LOAD SETUP FROM USB: Press **SET** button to load the pen drive setting to the current DVR.

J-3. BACKUP SETUP TO USB: Press **SET** button to backup the current DVR setting into pen drive.

K. DAYLIGHT SAVING TIME SETUP

Press ◄ or ►/ mouse wheel to change the DAYLIGHT MODE option: Disable, Manual and Auto.

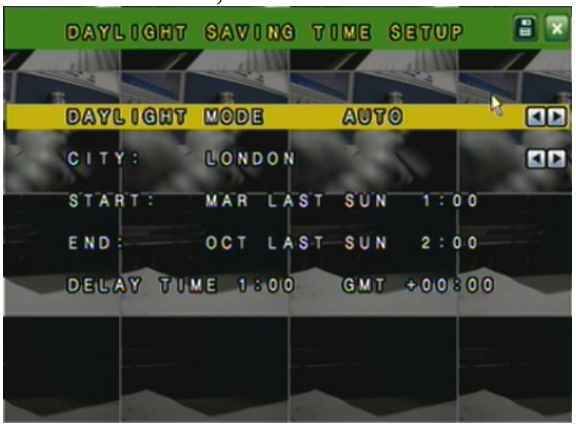
K-1. MANUAL MODE

Use **SET** to change the Day Light Saving start and end time.

Press ◄ or ►/ mouse wheel to change DELAY TIME

K-2. AUTO MODE

Press ◄ or ►/ mouse wheel to change CITY option. Different CITY will have different START, END and DELAY TIME.


DAYLIGHT SAVING TIME SETUP
DAYLIGHT MODE AUTO
CITY: LONDON
START: MAR LAST SUN 1:00
END: OCT LAST SUN 2:00
DELAY TIME 1:00 GMT +00:00

4 DVR PLAYBACK

Click the playback button on the pop-up menu.

Note: the pop-up menu can be activated by moving the mouse cruise to the bottom of the live viewing screen.

Note: Under playback mode, it will output sound when switch to full screen mode.

Note: Under 13 split screen mode(in CDR 1620VDE Only), user can see the live-time image from the middle channel and can change the channel number by using mouse wheel.

4.A. DISK INFORMATION

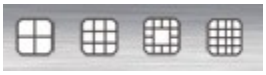
In playback mode, press this button to display disk and pen drive information.

4.B. RECORD BACKUP

With playback mode, press this button to backup record (.264 video backup) and press this button again to finish backup. For performing the single image backup (.Y42 single image backup), press first and then click this button to backup the necessary image.

4.C. AUDIO CONTROL

Press this button to turn the audio on or off

4.D.  DISPLAY CONTROL

Within playback mode, use display control to switch the camera channel.

4.E. RECORD AND PLAYBACK CONTROL

Same as front panel controller and remote controller.

4.1 TIME SEARCH

Double click left button of the mouse to trigger play search and select play time search.

PLAY SEARCH
PLAY TIME SEARCH
EVENT LIST SEARCH
2008/12
SUN MON TUE WED THU FRI SAT
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31

4.2 EVENT SEARCH

Double click left button of the mouse to trigger play search and select event time search.

PLAY SEARCH
PLAY TIME SEARCH
EVENT LIST SEARCH
2008/12
SUN MON TUE WED THU FRI SAT
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31

Please select the event to playback。

Moreover, use TYPE and CHANNEL, two options to perform the advanced search. As the following image,

5 BACKUP PLAYBACK

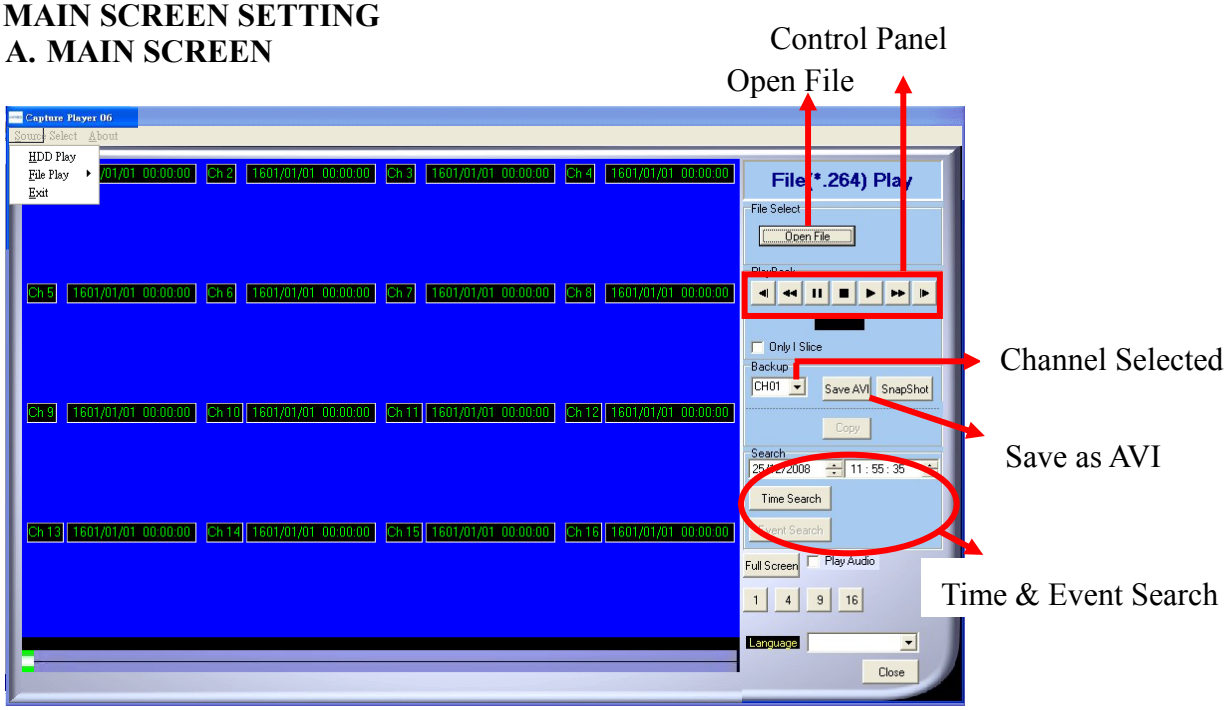
Playback of backup files or HDD files can be executed through Capture Player 06.

SYSTEM REQUIREMENT
CPU: Intel Celeron 1.6G
MEMORY: 256MB.
VGA: 32MB
VGA RESOLUTION: 1024 x 768.
OS: Windows XP / 2000

SUGGESTED REQUIREMENT
CPU: Intel P4 2.8G
MEMORY:512MB or above
VGA:64MB or above
VGA RESOLUTION:1024 x 768
OS: Windows XP / 2000
NETWORK BANDWIDTH: Upload Speed is 512kbps or above

5.1 MAIN SCREEN SETTING

A. MAIN SCREEN

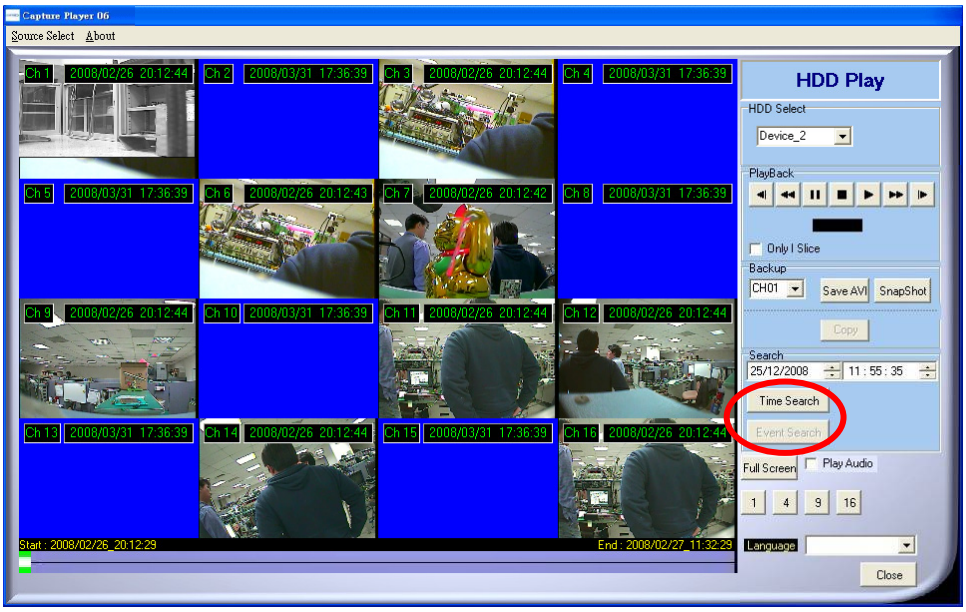


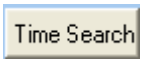
B. HDD PLAY

Play about all the data from the Hard disk of DVR or perform the specific Time and Event Search to play.

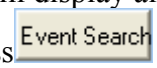
Note: Remove the DVR HDD and connect it to the PC to play the HDD. Capture Player 06 can be collected from USB Playback, DVD-RW Playback. Capture Player 06 can be downloaded from DVR through webserver also. Download "Player" within "Others" under Webserver Menu.

B-1. TIME SEARCH

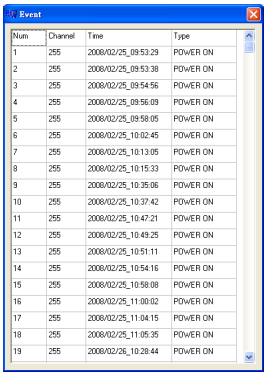


Insert search Date and Time and then click  to play all the searched files.

B-2. EVENT SEARCH

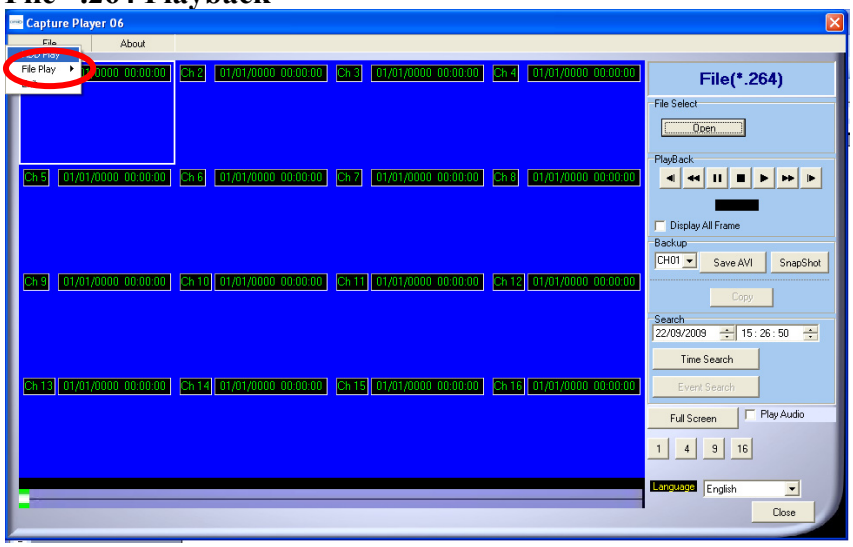
It will display all the events which are reserved within the DVR HDD after press 

(Shown in the following) and double click left button of mouse to trigger event.

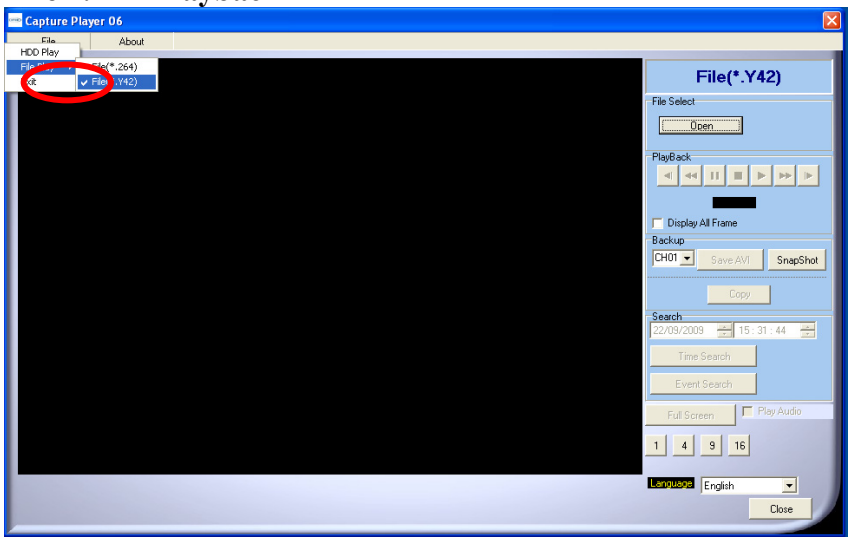


Capture Player 06 can play not only DVR H.D.D. but also the *.264 and *.Y42 files which are reserved within the data storage devices. (i.e. CD/DVD disc, pen drive and PC H.D.D which has data backup from DVR H.D.D)

C. File *.264 Playback

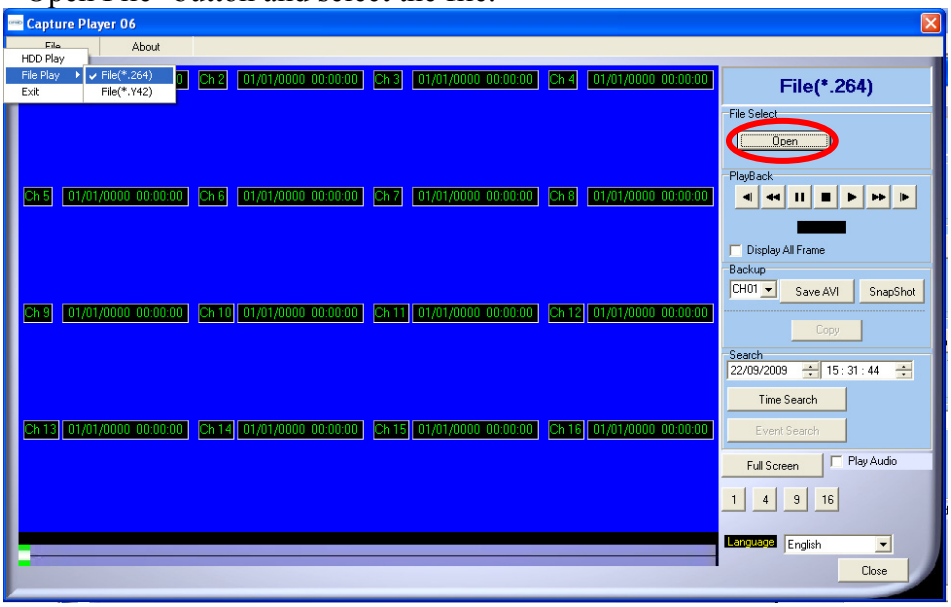


D. File *.Y42 Playback



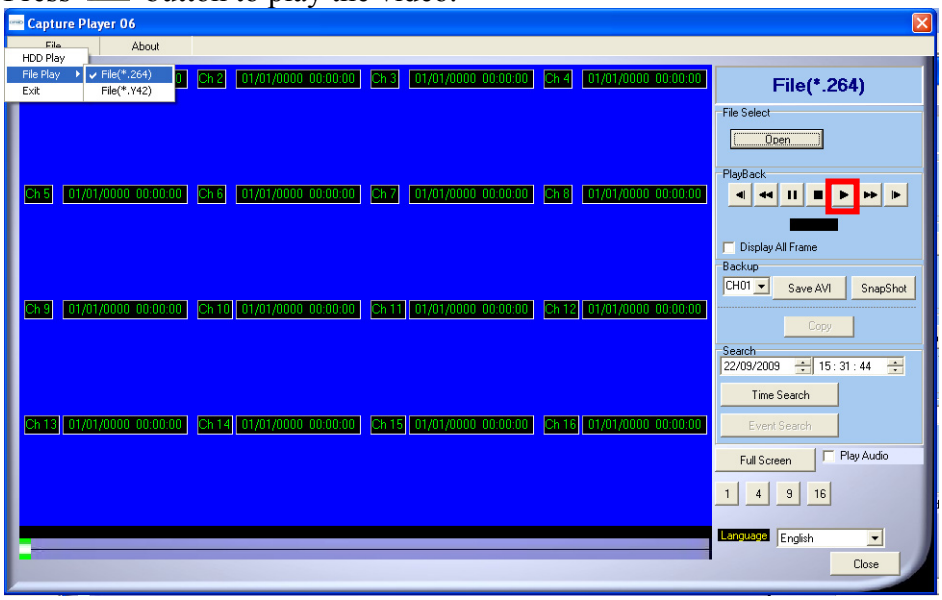
5.2 CD/DVD BACKUP PLAYBACK

A. Insert the CD/DVD disk into CD/DVD ROM, the software will auto pop out, and press "Open File" button and select the file.



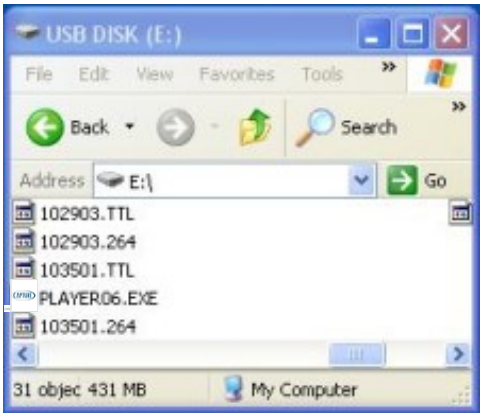
If Player doesn't pop up by itself, double click on the Capture Player 06 application available in the CD/DVD to run the software. Then with "Open" file option, browse the *.264 in the CD/DVD and select the same.

B. Press button to play the video.

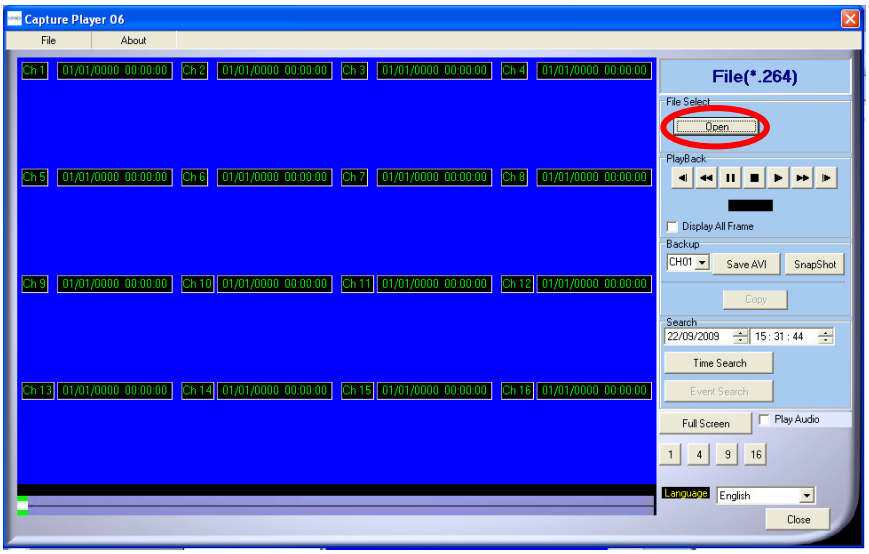


5.3 USB & LOCAL BACKUP FILE PLAYBACK

A. Plug the USB disk into PC or check the local backup folder.
If using USB mode, please double click Capture PLAYER 06.exe from the pop-up window of USB

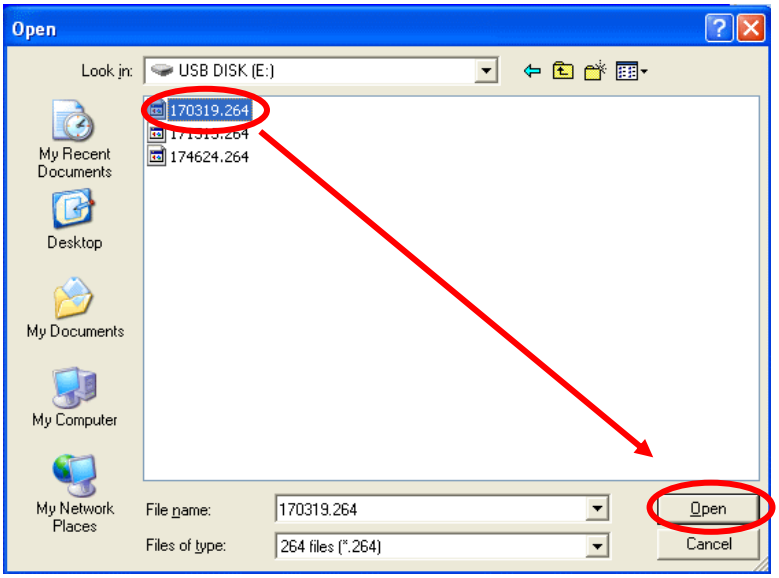


B. The play backup program would appear on the screen, select "Open".

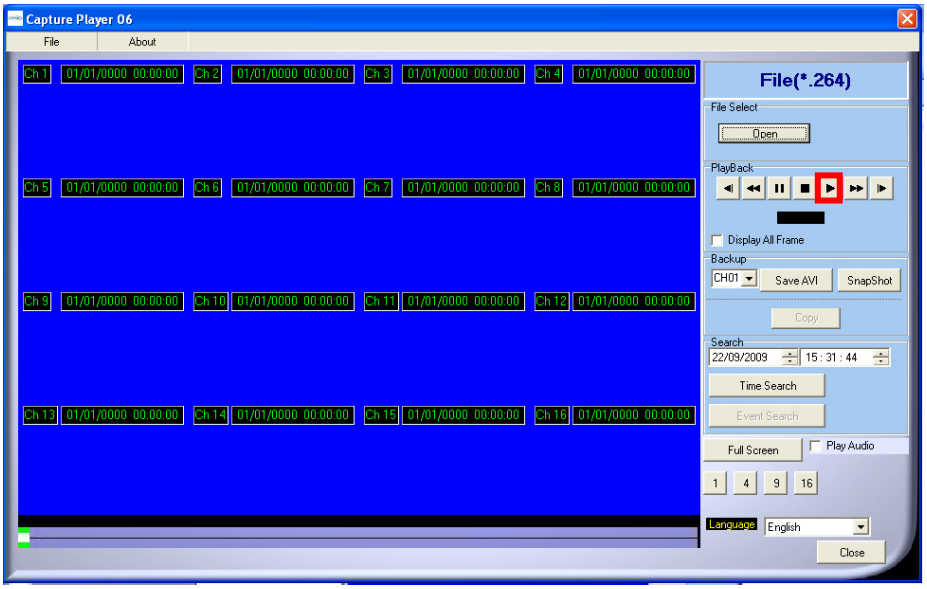


C. Open the USB disk located driver letter. (Example E:) or the local backup folder, and select the file to playback.

The backup file will named as the time when backup, as like:
170319.264 will be 17:03:19

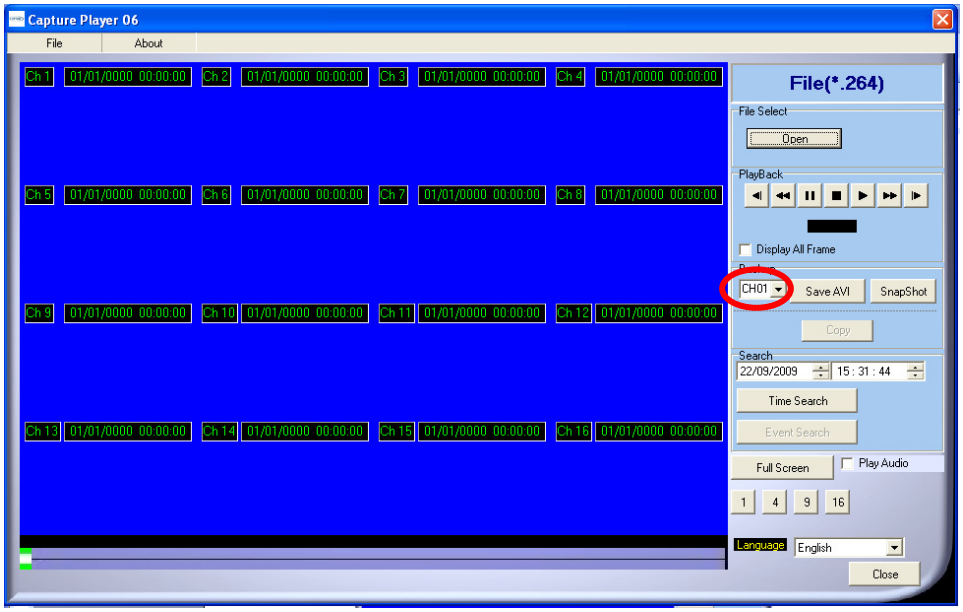


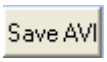
D. Press the play icon to play the video.



5.4 BACKUP FILE TO AVI

A. Please select specific **channel,** from the drag down option, of which video need to be converted into avi format to suite general media players.



B. During video playback mode please press AVI Conversion button 

to initiate conversion.

C. Make up a filename (i.e. AVI_CH01_25122008_145510.avi) in the consecutive window and choose the location to save the avi file and press

button to start AVI conversion. Pls take 10 sec advance time to consider the process of choosing the location for AVI conversion

D. While AVI Conversion is in progress, press

to finish conversion as required.

6 NETWORK VIEWING & PLAYBACK

SYSTEM REQUIREMENT
CPU: Intel Celeron 1.6G
MEMORY: 256MB.
VGA: 32MB
VGA RESOLUTION: 1024 x 768.
OS: Windows XP / 2000

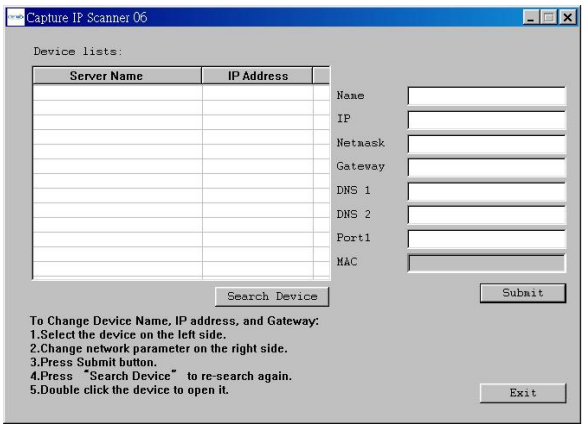
SUGGESTED REQUIREMENT
CPU: Intel P4 2.8G
MEMORY:512MB or above
VGA:64MB or above
VGA RESOLUTION:1024 x 768
OS: Windows XP / 2000
NETWORK BANDWIDTH: Upload Speed is 512kbps or above

6.1 IP ADDRESS SETUP ON DESK-TOP SITE

Install DVR device in LAN or use network cable to connect with PC. This is for IPInstallerEng.exe to set up IP address of cameras. If OS is Windows XP SP2 or above, the following Windows Security Alert will popup. Then, please click on **Unblock**.

Windows Security Alert
To help protect your computer, Windows Firewall has blocked some features of this program.
Do you want to keep blocking this program?
Name: Capture IP Scanner 06
Publisher: Unknown
Keep Blocking
Unblock
Ask Me Later
Windows Firewall has blocked this program from accepting connections from the Internet or a network. If you recognize the program or trust the publisher, you can unblock it. When should I unblock a program?

Then, IPInstallerEng.exe will popup:
DVR default IP address is 192.168.1.220



On the Device Lists, it lists all servers. Click on one server and then its IP setting will show on the right side. After editing the parameters and clicking on Submit, the following dialogue box will popup. And, it will reboot the device with new parameters.

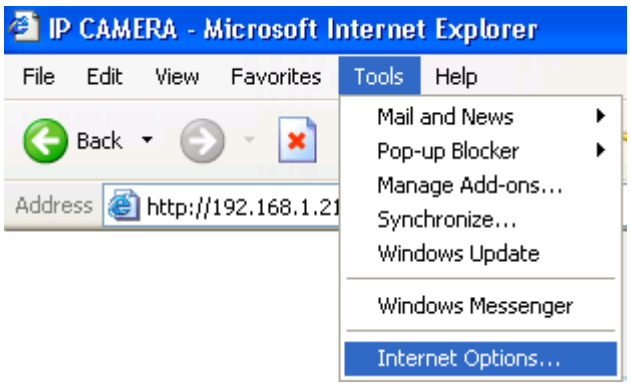
6.2 OPTIONAL MICROSOFT INTERNET EXPLORER SETUP

OPTION 1: DISABLE ACTIVEX WARNING

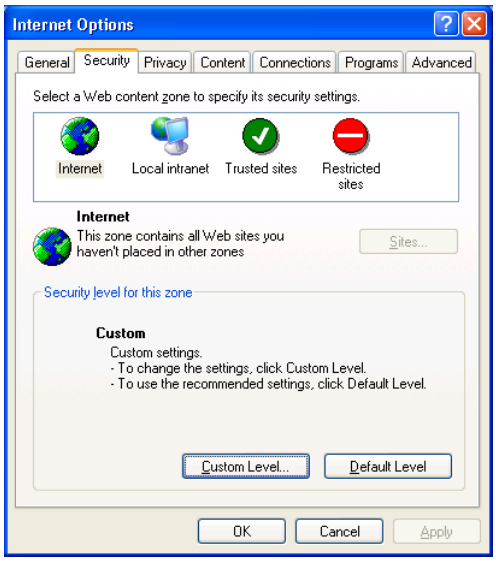
A. IE → Tools → Internet Options → Security → Custom Level → Security Settings → Download unsigned ActiveX controls → Enable or Prompt (recommend).

B. IE → Tools → Internet Options → Security → Custom Level → Security Settings → Initialize and script ActiveX controls not marked as safe → Enable or Prompt (recommend).

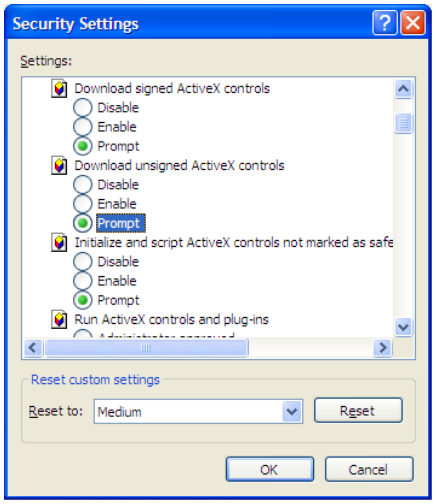
1



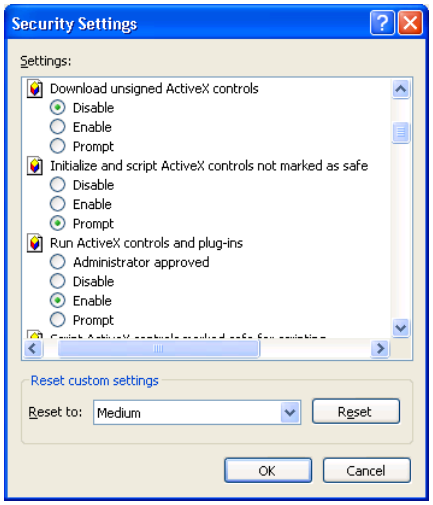
2



3



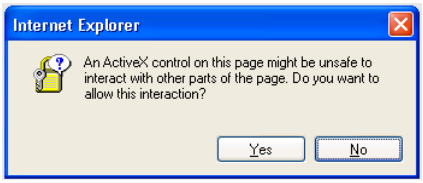
4



5

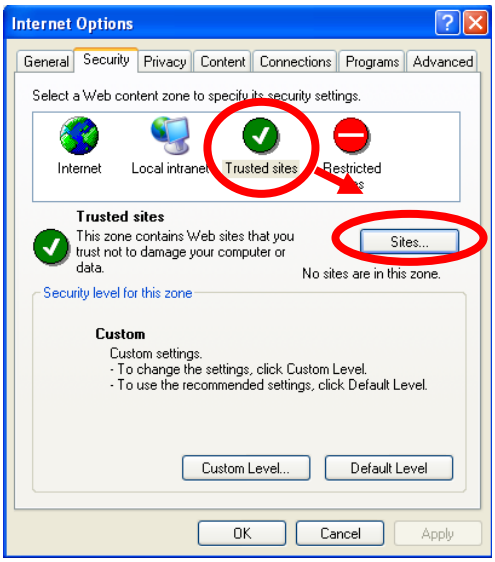
Above three options are all based on select as the prompt.

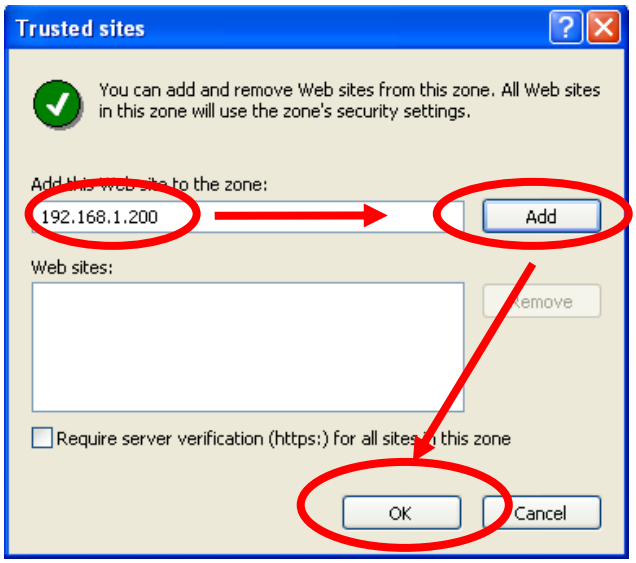
As indicated in the dialogue box. Please select "YES."


Internet Explorer
An ActiveX control on this page might be unsafe to interact with other parts of the page. Do you want to allow this interaction?
Yes
No

OPTION 2: ADD TO TRUSTED SITES

IE → Tools → Internet Options → Security → Trusted sites → Sites



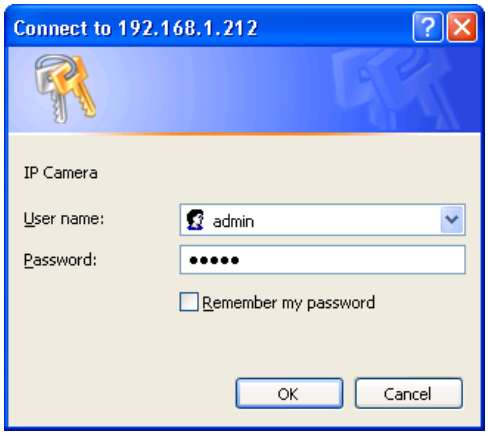

Trusted sites
You can add and remove Web sites from this zone. All Web sites in this zone will use the zone's security settings.
Add this Web site to the zone:
192.168.1.200
Add
Web sites:
Remove
Require server verification (https:) for all sites in this zone
OK
Cancel

6.3 LOGIN

Enter the IP address of the DVR that you wish to Login to, on the address bar of IE on the Computer, which is in network with the DVR.

A. ACCOUNT & PASSWORD LOGIN

The following User name & Password Login window will popup.

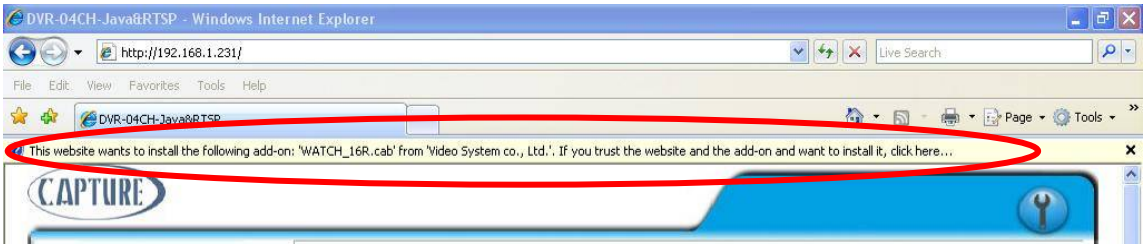


Default user name: admin

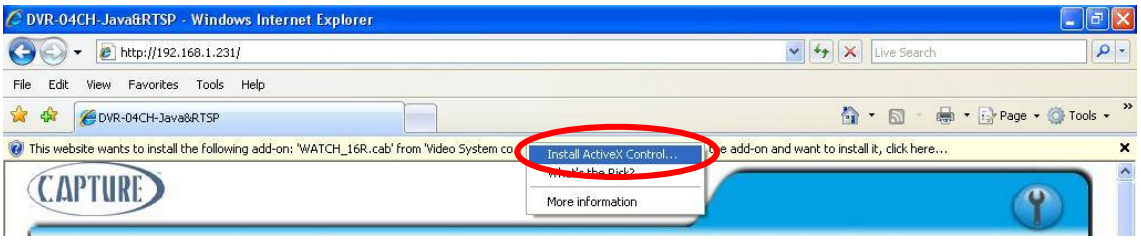
Default password: admin

Initially the DVR web server window may initiate Activex installation.

B. INSTALL ACTIVEX


DVR-04CH-Java&RTSP - Windows Internet Explorer
http://192.168.1.231/
This website wants to install the following add-on: 'WATCH_16R.cab' from 'Video System co., Ltd.'. If you trust the website and the add-on and want to install it, click here...
CAPTURE

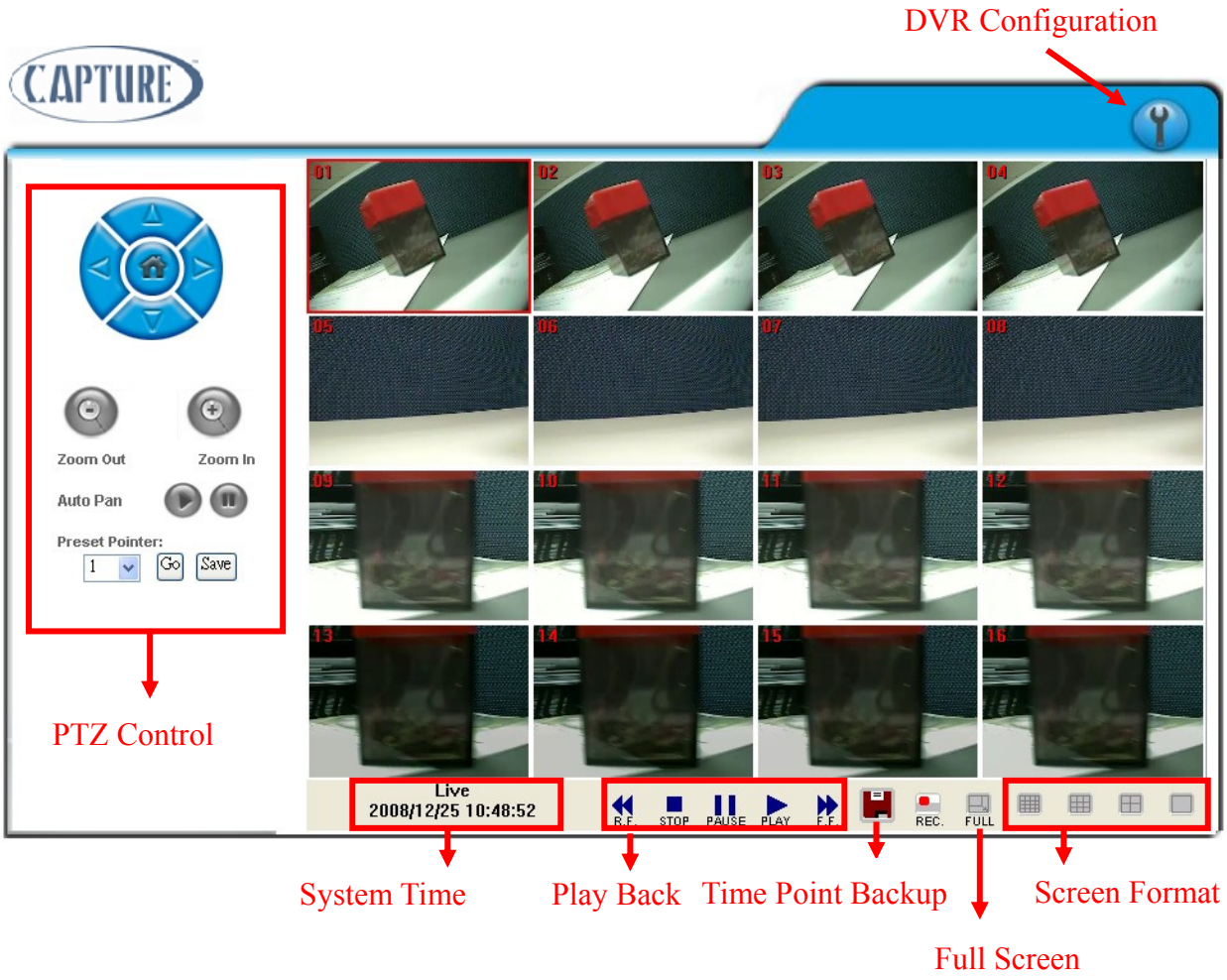
C. START INSTALL ACTIVEX



On executing the comment to Install Activex Control, Pop up window will ask for installing "Watch_16R". Run the same.

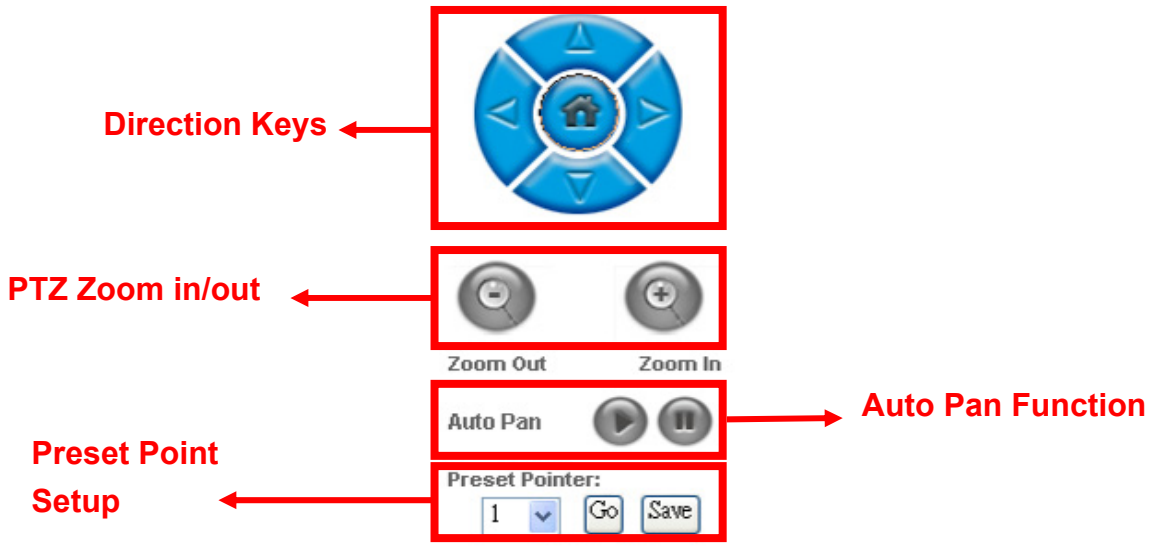
6.4 REMOTE CONTROL

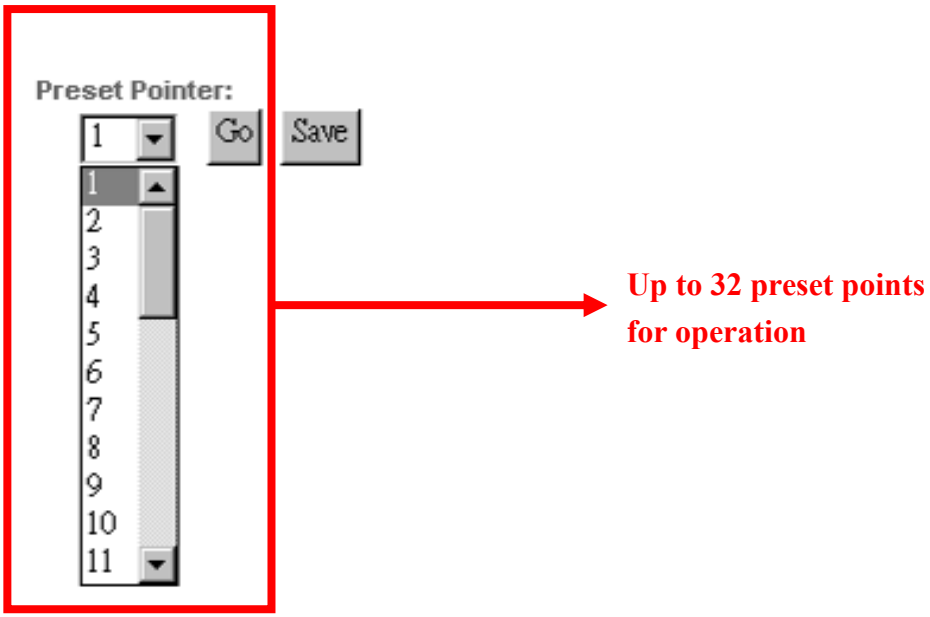
LIVE VIEWING



A. DVR Configuration
Get into DVR network menu.

B. PTZ Control
PTZ control function panel





C. SYSTEM TIME
Live viewing mode: The current live viewing time.

D. SCREEN FORMAT
Switch screen format and click twice to switch different channels with full screen.

E. **Full Screen.** Click again to return.

F. **REC.** Recorded images are saved as H.264 file format which can be viewed using Capture player 06.

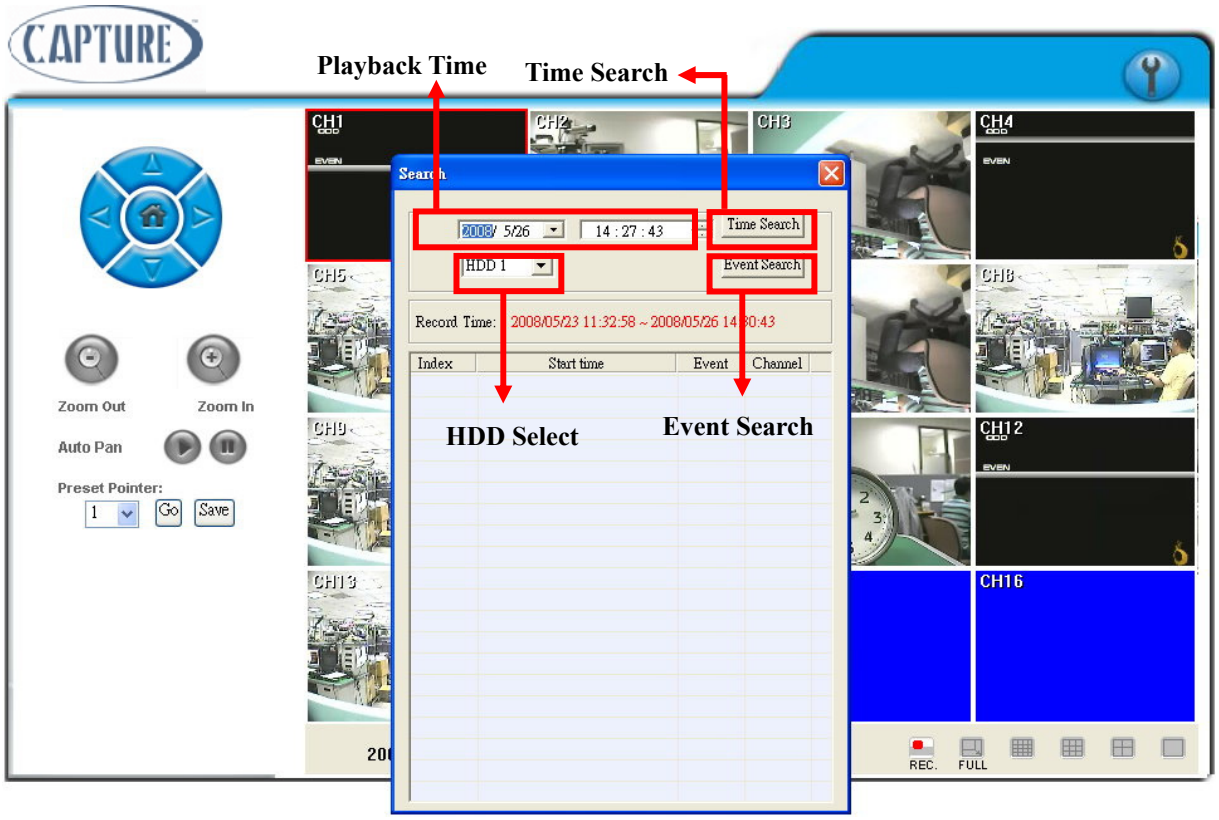
G. **Playback**

H. **Time-Point Backup**

Click and playback window will popup

PLAYBACK by TIME SEARCH & EVENT SEARCH.

If HDD of the DVR is connected to the PC where browser is open, use Time search or Event search to view the data available on the disc.



A. HDD Select

User can select HDD1 or HDD2 for playback

B. Playback Time

User can select the time then press “Time Search” for playback.

C. Time Search

User can select the time then press “Time Search” for playback.

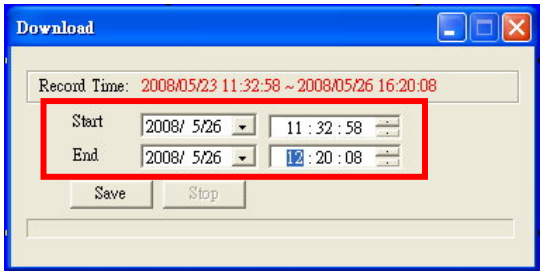
D. Event Search

User can select event item by pressing “Event Search” for playback.

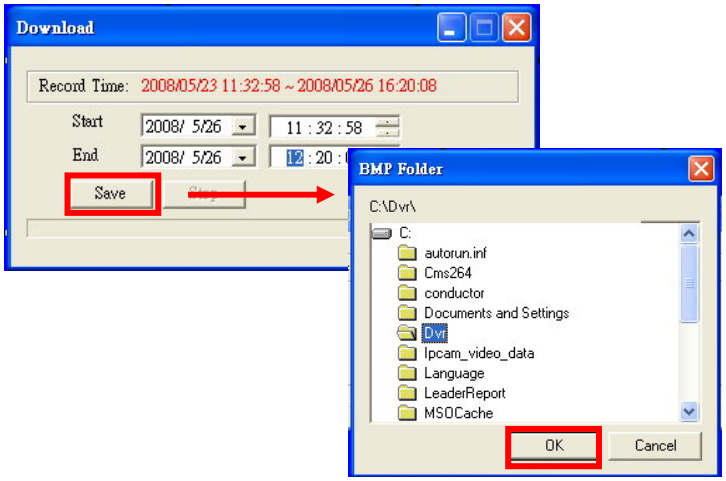
TIME-POINT BACKUP

Click to operate Time-Point backup.

First, select Start and End backup times which have to be among the Record Time.



Then, click Save button to select the position on PC where the user is going to backup the data. After that, press OK button to start the backup.



Finally, double-click the left button of the mouse to open the saved backup file. The backup file will name as the PC time when backup started, such as

(10022009140000.264) equates to 10/02/2009 14:00:00 (DD/MM/YYYY HH:MM:SS).

OTHER FUNCTIONS

User can use other functions by clicking the left of mouse

A. Snapshot:

User can save any single picture from image. Click on the channel for which snapshot is required. Later right click on the mouse and select snapshot.

B. Performance:

User can select image quality (high, medium & low).

C. Use Overlay:

User can use Overlay function.

D. Play audio:

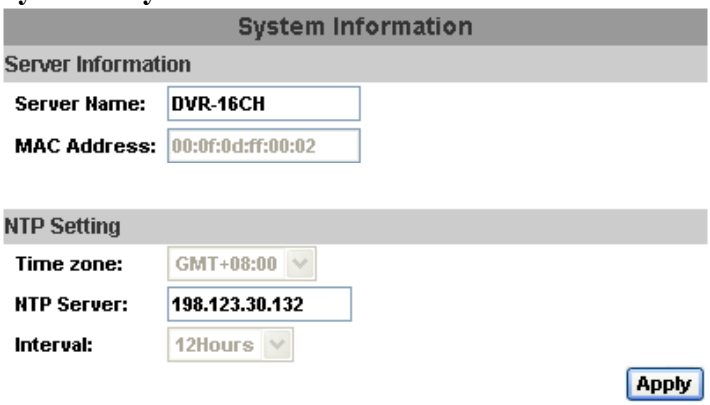
User can play audio function by channel.

Note: remote user can receive audio from DVR & the audio will be saved with image, while processing video backup.

User can view and change/set DVR Configuration through IE window itself. Click on **Icon to Login to the DVR settings. Please make sure your Login ID and Password had administrator rights to Login to settings.**

6.5 DVR CONFIGURATION through IE Window

A. System - System Information



A-1 SYSTEM INFORMATION

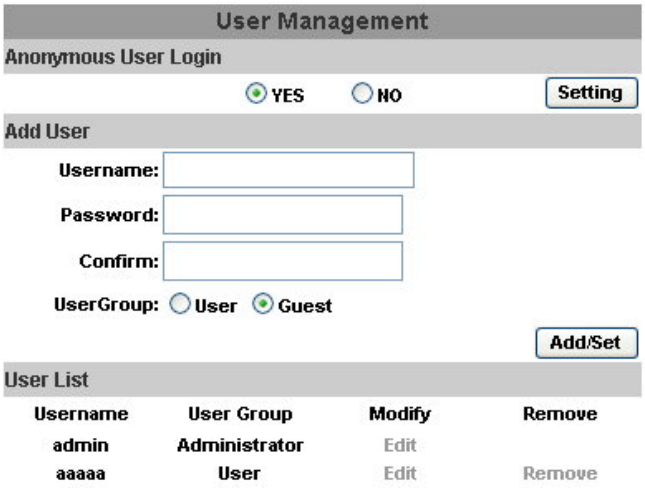
SERVER NAME: This is the name of the DVR and this name will be shown on the IE Browser for the DVR.

A-2 NTP Setting

NTP SERVER: Revise the time of DVR via different NTP Server.

Note: Time zone and Interval cannot adjust in here (User can adjust both in DATE and TIME SETUP option of DVR Menu).

B. SYSTEM – USER MANAGEMENT



User Management provides 3 levels of authority*: Administrator (the highest), User, and Guest.

Administrator: Possessing the highest level of authority to operate full functions within network.

User: Having Live Image and Video Playback authority. Moreover, PTZ controlled is included as well.

Guest: Only have Live Image authority.

Default administrator account: Username: admin Password: admin

***Rights under different level of authority cannot be changed, its predefined**

B-1 ANONYMOUS USER LOGIN:

YES: Accept anonymous user login without password as **guest** login.

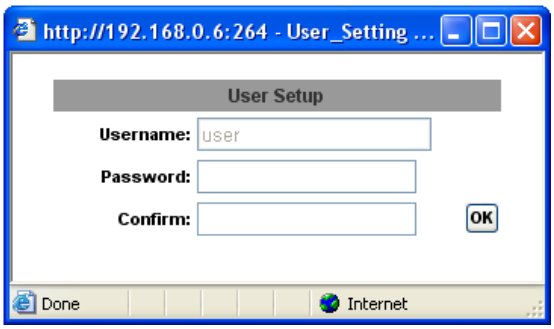
NO: Anonymous login unacceptable.

B-2 USER MANAGEMENT:

Add: Input Username and Password and then click on **Add/Set** to save.

Modify: Click on "Edit" to modify Users login details.

On completion click on **OK**.

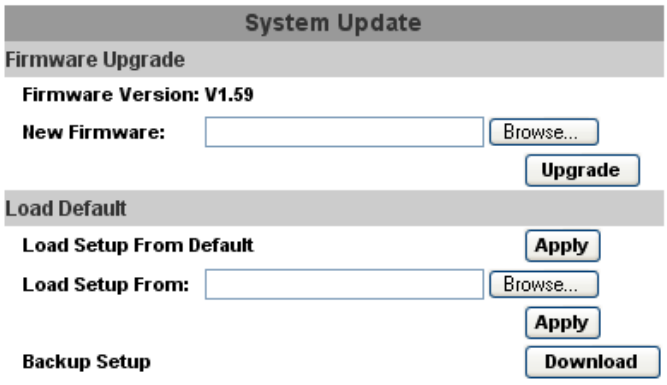


Remove: To delete User, simply click on **Remove**,

The box appears, click on OK to confirm to remove or CANCEL to retain User

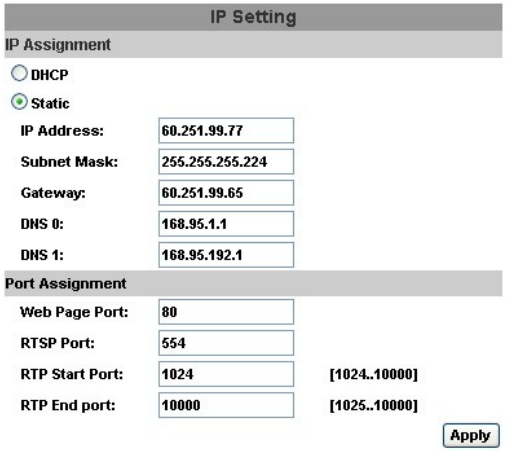
C. SYSTEM / SYSTEM UPDATE

Click on the "Browse" button to select the latest firmware and then press "Upgrade" button to upgrade the firmware. Moreover, press "Apply" button or "Download" button to load the setup/ configuration of the DVR from USB flash drive or backup the setup of the DVR to USB flash drive.



Note: Pls make sure that the DVR, IE Browser window, PC through which upgrade is happening are not turned off or closed, until the upgrade and reboot of the DVR happens to complete the upgrade function. During upgrade if anything happens, pls contact the dealer for support.

D. NETWORK – IP SETTING of the DVR through IE Browser.



D-1 IP ASSIGNMENT

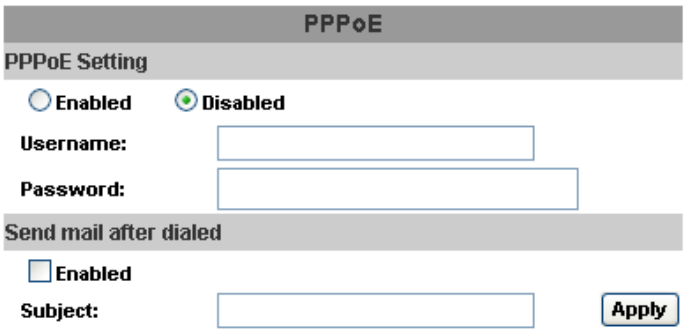
DHCP: In Dynamic Host Configuration Protocol (DHCP) mode, DHCP server will get setting done automatically.

STATIC IP: Please input IP address, Subnet Mask, and Gateway based on network environment.

D-2 PORT ASSIGNEMENT

With IP Share (Router), the Ports needed to be adjusted in case of conflict.

E.NETWORK – PPPoE



E-1 PPPoE SETTING

Click on Enabled to enable ADSL dial function.

Username: Username for ADSL account.

Password: Password for ADSL account.

After dialed successfully, new IP address will appear.

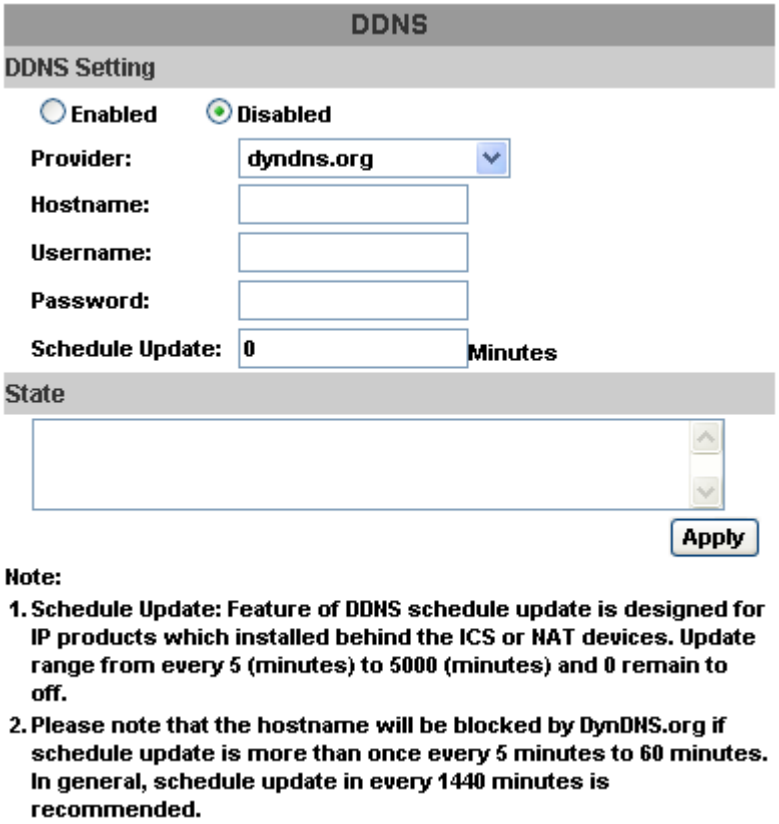
E-2 SEND MAIL AFTER DIALED

Click on Enabled to enable SEND MAIL AFTER DIALED function.

E-3 SUBJECT

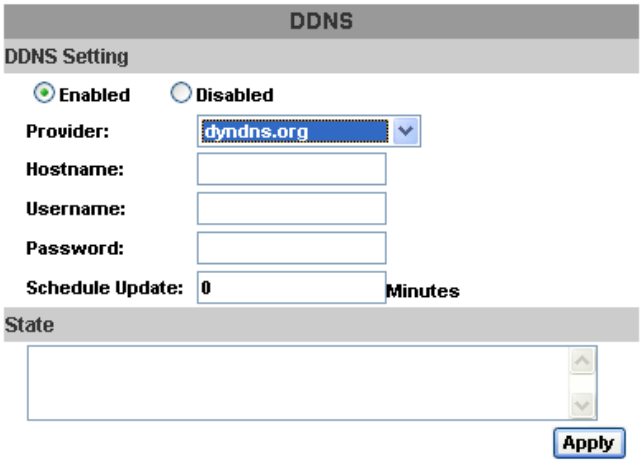
Mail subject.

F.NETWORK / DDNS SETTING


DDNS
DDNS Setting
Enabled
Disabled
Provider:
dyndns.org
Hostname:
Username:
Password:
Schedule Update:
0
Minutes
State
Apply
Note:
1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

Click on "Enabled" to enable DDNS function and provide the server details to use the function.

F-1 DYNDNS.ORG



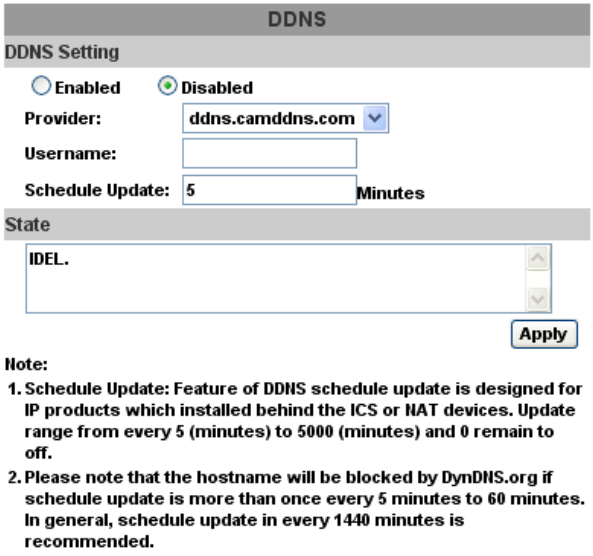
DDNS SETTING - DYNDNS.ORG

PROVIDER: Select dyndns.org
HOSTNAME: The registered hostname in DYNDNS.ORG.
USERNAME: The registered username in DYNDNS.ORG.
PASSWORD: The registered password in DYNDNS.ORG.
SCHEDULE UPDATE: A period of time to update IP address.

STATE

1. Updating: Information update.
2. Idle: Stop service.
3. DDNS registered successfully, now log by http://<username>.ddns.camddns.com: Registered successfully.
4. Updating Failed, the name is already registered.
5. Updating Failed, please check your internet connection.

F-2 DDNS.CAMDDNS.COM


DDNS
DDNS Setting
Enabled
Disabled
Provider:
ddns.camddns.com
Username:
Schedule Update:
5
Minutes
State
IDEL.
Apply
Note:
1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

DDNS SETTING – DDNS.CAMDDNS.COM

PROVIDER: Select ddns.camddns.com

USERNAME: The registered username in DDNS.CAMDDNS.COM.

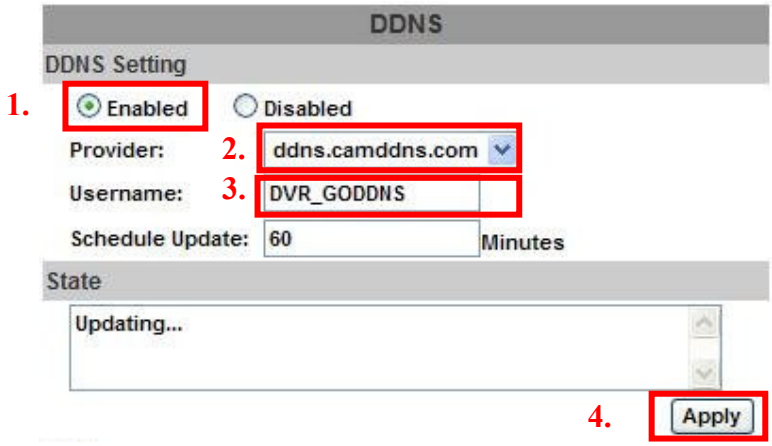
SCHEDULE UPDATE: A period of time to update IP address.

STATE

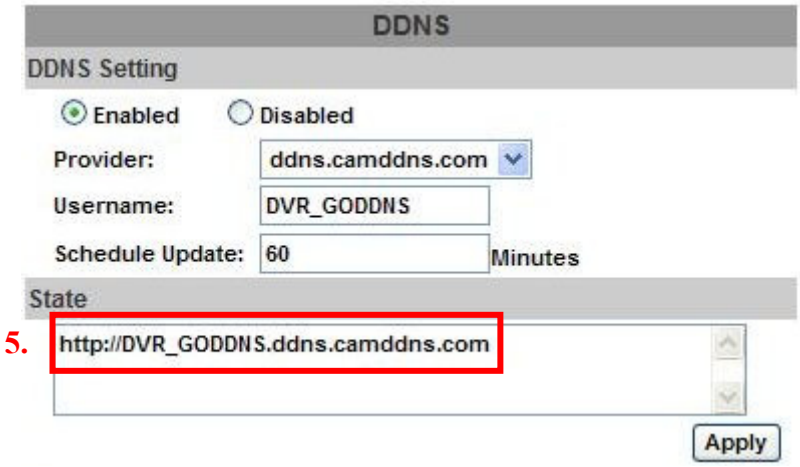
1. Updating: Information update.
2. Idle: Stop service.
3. DDNS registered successfully, now log by http://<username>.ddns.camddns.com: Registered successfully.
4. Updating Failed, the name is already registered.
5. Updating Failed, please check your internet connection.

DDNS Setting Steps:

Press “ENABLE” (1) option to enable DDNS function and select Provider (2) “**ddns.camddns.com**” from the provider drop down list which is suggested to use. In the following, insert the username (3) which the user wants to apply (i.e. **DVR_GODDNS** in here). After that, click “Apply” button (4) to apply a DDNS domain name.



Finally, the DVR domain name **(http://DVR_GODDNS.ddns.camddns.com)** will be shown on the state block (5).



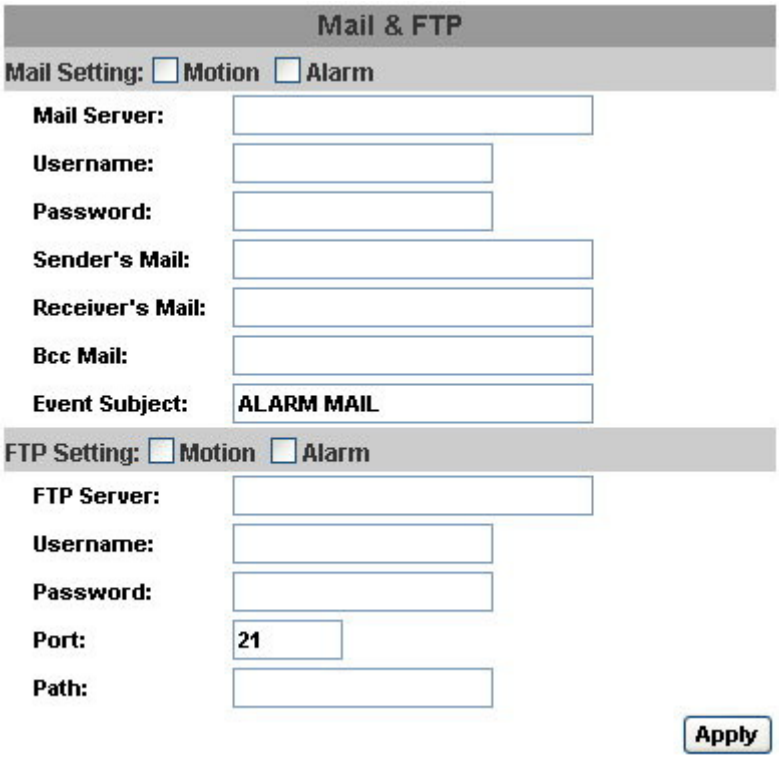
NOTE: 1. If other provider such as ddns2.ydsdvr.com is selected, all of the setting steps are the same as ddns.camddns.com setting.

2. However, if dyndns.org provider is selected, please go to www.dyndns.org website to register the account first. The user has to fill in the username, password and hostname for applying the account. After the user applied the account successfully, the dyndns.org will give the user a complete DDNS domain name.

3. If setting up IP "**schedule update**" too frequently, the IP may be blocked. In general, schedule update every day (**1440 minutes**) is recommended.

G.NETWORK / Mail & FTP

Click on “Motion” or “Alarm” option to enable Mail Setting and FTP Setting function.



Mail Server: The IP address of Mail Server
Username: The username while log in to the mail server.
Password: The password while log in to the mail server.
Sender’s Mail: The sender’s account when send the mail via this mail server.
Receiver’s Mail: The receiver’s mail address.
Bcc Mail: The receiver’s mail address for Bcc Mail.
Event Subject: The subject of this mail. (Default value is ALARM MAIL)

FTP Server: The IP address of FTP Server.
Username: The username while log in to the ftp server.
Password: The password while log in to the ftp server.
Port: The port number of file transmission. (Default value is 21)
Path: The ftp path where the user wants to reserve the information.

After entering all the settings, click on Apply button to reserve the setting.

H. OTHERS / Player

After choosing to download player, user can click “Run” button to run the player at the local PC.

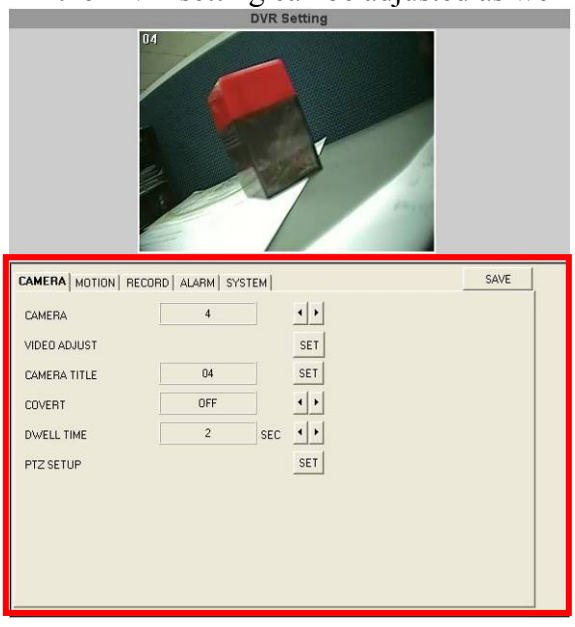
File Download - Security Warning
Do you want to run or save this file?
Name: Player06.exe
Type: Application
From: 60.251.99.77
Run
Save
Cancel
While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. What's the risk?

I. OTHERS / Mobile Viewer

Click the drop down list of connection mode to select the sort of mobile viewer connection. Then click Apply to reserve the setting. There are JAVA / IPhone and 3GPP (MPEG4) two options. Moreover, the video quality can be setup as well.

J. OTHERS/ DVR Setting

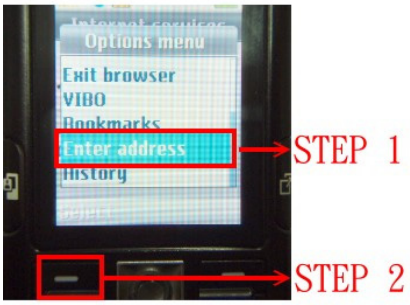
All the DVR setting can be adjusted as well via the Internet.

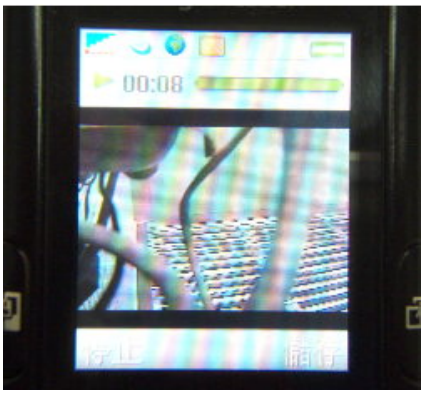


User can change the view and change the DVR parameters thru this option if the authority level permits the same.

7. 3GPP APPLICATION & SETTING

3GPP (also known as 3rd Generation Partnership Project) is a corporation which formulate 3rd-generation communication standard specification. Via this wireless communication protocol, the 3G mobile can perform the remote control. The following example is operated by Sony Ericsson 3G mobile phone:

1. Press MENU KEY to get into menu.	2. Select **Internet services**
3. In the **Internet services** page, press **More KEY**	4. Select **Enter address**, and press **Select KEY**
	
5. Select **New address**，and press **Enter KEY**	6. Fill in address rtsp:// <<IP>>/channel **(ex: rtsp://220.137.65.246/CH03)** and press Go To key.

7. “**Connected to media server”** will appear	8. Success with vivid image
	

* 1. 3GPP BANDWIDTH: Minimum **30kbit /sec. per channel.**
  2. CONNECTION NUMBERS: Maximum **16 people per channel.**
  3. 3GPP does not work when DVR is setup in D1 resolution

APPENDIX A: RECORDING TIME LAPSE (HOURS)

Full D1-720x576

160 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	simple	complex	average	simple	complex	average	simple	complex	average
	1.00	7.04	3.52	5.10	12.98	6.78	4.56	16.79	8.98	7.00	21.35	19.58
50	932	132	532	182	71	126	204	55	129	133	43	88
20	1864	264	1064	365	143	254	408	111	259	266	87	176
16	2912	413	1662	571	224	397	638	173	405	416	136	276
8	5825	827	3326	1142	448	795	1277	346	811	832	272	552
4	11650	1654	6652	2284	897	1590	2555	693	1624	1664	545	1104

250 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	simple	complex	average	simple	complex	average	simple	complex	average
	1.00	7.04	3.52	5.10	12.98	6.78	4.56	16.79	8.98	7.00	21.35	19.58
50	1456	206	831	285	112	198	319	86	202	208	68	138
25	2912	413	1662	571	224	397	638	173	405	416	136	276
16	4551	646	2598	892	350	621	998	271	634	650	213	431
8	9102	1292	5197	1784	701	1242	1996	542	1269	1300	426	863
4	18204	2585	10394	3569	1402	2485	3992	1084	2538	2600	852	1726

400 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	simple	complex	average	simple	complex	average	simple	complex	average
	1.00	7.04	3.52	5.10	12.98	6.78	4.56	16.79	8.98	7.00	21.35	19.58
50	2330	330	1330	456	179	317	511	138	324	332	109	220
20	4660	661	2660	913	359	636	1022	277	649	665	218	441
16	7281	1034	4157	1427	560	993	1596	433	1014	1040	341	690
8	14563	2068	8315	2855	1121	1988	3193	867	2030	2080	682	1381
4	29127	4137	16632	5711	2243	3977	6387	1734	4060	4161	1364	2762

500 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	simple	complex	average	simple	complex	average	simple	complex	average
	1.00	7.04	3.52	5.10	12.98	6.78	4.56	16.79	8.98	7.00	21.35	19.58
50	2912	413	1662	571	224	397	638	173	405	416	136	276
25	5825	827	3326	1142	448	793	1277	346	811	832	272	552
16	9102	1292	5197	1784	701	1242	1996	542	1269	1300	426	863
8	18204	2585	10349	3569	1402	2485	3992	1084	2538	2600	854	1726
4	36408	5171	20789	7138	2804	4971	7984	2168	5076	5201	1705	3453

750 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	simple	complex	average	simple	complex	average	simple	complex	average
	1.00	7.04	3.52	5.10	12.98	6.78	4.56	16.79	8.98	7.00	21.35	19.58
50	4369	620	2494	856	336	596	958	260	609	624	204	414
20	8738	1241	4989	1713	673	1193	1916	520	1218	1248	409	828
16	13653	1939	7796	2677	1051	1864	2994	813	1903	1950	639	1294
8	27306	3878	15592	5354	2103	3728	5988	1626	3807	3900	1279	2589
4	54613	7757	31185	10708	4207	7457	11976	3252	7614	7801	2558	5179

1TB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	Simple	complex	average	simple	complex	average	simple	complex	average
	1.00	7.04	3.52	5.10	12.98	6.78	4.56	16.79	8.98	7.00	21.35	19.58
50	5825	827	3326	1142	448	795	1277	346	811	832	272	552
25	11650	1654	6652	2284	897	1590	2555	693	1624	1664	545	1104
16	18204	2585	10394	3569	1402	2485	3992	1084	2538	2600	852	1726
8	36408	5171	20789	7138	2804	4971	7984	2168	5076	5201	1705	3453
4	72817	10343	41580	14277	5609	9943	15968	4336	10152	10402	3410	6906

Half D1- 720x288

160 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	Simple	complex	average	simple	complex	average	simple	complex	average
	1.00	3.80	2.40	2.00	6.00	4.00	5.00	10.00	7.50	6.00	17.00	11.50
100	466	122	294	233	77	155	93	46	69	77	27	52
50	932	245	588	466	155	310	186	93	139	155	54	104
25	1864	490	1177	932	310	621	372	186	279	310	109	209
16	2912	766	1839	1456	485	970	582	291	436	485	171	328
8	5825	1533	3679	2912	970	1941	1165	582	873	970	342	656
4	11650	3066	7358	5825	1941	3883	2330	1165	1747	1941	685	1313

250 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	Simple	complex	average	simple	complex	average	simple	complex	average
	1.00	3.80	2.40	2.00	6.00	4.00	5.00	10.00	7.50	6.00	17.00	11.50
100	728	191	459	364	121	242	145	72	108	121	42	81
50	1456	383	919	728	242	485	291	145	218	242	85	163
25	2912	766	1839	1456	485	970	582	291	436	485	171	328
16	4551	1197	2874	2275	758	1516	910	455	682	758	267	512
8	9102	2395	5748	4551	1517	3034	1820	910	1365	1517	535	1026
4	18204	4790	11497	9102	3034	6068	3640	1820	2730	3034	1070	2052

400 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	Simple	complex	average	simple	complex	average	simple	complex	average
	1.00	3.80	2.40	2.00	6.00	4.00	5.00	10.00	7.50	6.00	17.00	11.50
100	1165	306	735	582	194	388	233	116	174	194	68	131
50	2330	613	1471	1165	388	766	466	233	349	388	137	262
25	4660	1226	2943	2330	776	1553	932	466	699	776	274	525
16	7281	1916	4598	3640	1213	2426	1456	728	1092	1213	428	820
8	14563	3832	9197	7281	2427	4854	2912	1456	2184	2427	856	1641
4	29127	7665	18396	14563	4854	9708	5825	2912	4368	4854	1713	3283

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	Simple	complex	average	simple	complex	average	simple	complex	average
	1.00	3.80	2.40	2.00	6.00	4.00	5.00	10.00	7.50	6.00	17.00	11.50
100	1456	383	919	728	242	485	291	145	218	242	85	163
50	2912	766	1839	1456	485	970	582	291	436	485	171	328
25	5825	1533	3679	2912	970	1941	1165	582	873	970	342	656
16	9102	2395	5748	4551	1517	3034	1820	910	1365	1517	535	1026
8	18204	4790	11497	9102	3034	6068	3640	1820	2730	3034	1070	2052
4	36408	9581	22994	18204	6068	12136	7281	3640	5460	6068	2141	4104

750 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	Simple	complex	average	simple	complex	average	simple	complex	average
	1.00	3.80	2.40	2.00	6.00	4.00	5.00	10.00	7.50	6.00	17.00	11.50
100	2184	574	1379	1092	364	728	436	218	327	364	128	246
50	4369	1149	2759	2184	728	1456	873	436	654	728	257	492
25	8738	2299	5518	4369	1456	2912	1747	873	1310	1456	514	985
16	13653	3592	8622	6826	2275	4550	2730	1365	2047	2275	803	1539
8	27306	7185	17245	13653	4551	9102	5461	2730	4095	4551	1606	3078
4	54613	14371	34492	27306	9102	18204	10922	5461	8191	9102	3212	6157

1T Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	Simple	complex	average	simple	complex	average	simple	complex	average
	1.00	3.80	2.40	2.00	6.00	4.00	5.00	10.00	7.50	6.00	17.00	11.50
100	2912	766	1839	1456	485	970	582	291	436	485	171	328
50	5825	1533	3679	2912	970	1941	1165	582	873	970	342	656
25	11650	3066	7358	5825	1941	3883	2330	1165	1747	1941	685	1313
16	18204	4790	11497	9102	3034	6068	3640	1820	2730	3034	1070	2052
8	36408	9581	22994	18204	6068	12136	7281	3640	5460	6068	2141	4104
4	72817	19162	45989	36408	12136	24272	14563	7281	10922	12136	4283	8209

CIF-360x288

160 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	Simple	complex	average	simple	complex	average	simple	complex	average
	0.50	1.90	1.20	1.00	3.00	2.00	2.50	5.00	3.75	3.00	8.75	5.88
200	466	122	294	233	77	155	93	46	69	77	26	51
100	932	245	588	466	155	310	186	93	139	155	53	104
50	1864	490	1177	932	310	621	372	186	279	310	106	208
25	3728	981	2354	1864	621	1242	745	372	558	621	213	417
16	5825	1533	3679	2912	970	1941	1165	582	873	970	332	651
8	11650	3066	7358	5825	1941	3883	2330	1165	1747	1941	665	1303
4	23301	6132	14716	11650	3883	7766	4660	2330	3495	3883	1331	2607

250 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	Simple	complex	average	simple	complex	average	simple	complex	average
	0.50	1.90	1.20	1.00	3.00	2.00	2.50	5.00	3.75	3.00	8.75	5.88
200	728	191	459	364	121	242	145	72	108	121	41	81
100	1456	383	919	728	242	485	291	145	218	242	83	162
50	2912	766	1839	1456	485	970	582	291	436	485	166	325
25	5825	1533	3679	2912	970	1941	1165	582	873	970	332	651
16	9102	2395	5748	4551	1517	3034	1820	910	1365	1517	520	1018
8	18204	4790	11497	9102	3034	6068	3640	1820	2730	3034	1040	2037
4	36408	9581	22994	18204	6068	12136	7281	3640	5460	6068	2080	4074

400 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	Simple	complex	average	simple	complex	average	simple	complex	average
	0.50	1.90	1.20	1.00	3.00	2.00	2.50	5.00	3.75	3.00	8.75	5.88
200	1165	306	735	582	194	388	233	116	174	194	66	130
100	2330	613	1471	1165	388	776	466	233	349	388	133	260
50	4660	1226	2943	2330	776	1553	932	466	699	776	266	521
25	9320	2452	5886	4660	1553	3106	1864	932	1398	1553	532	1042
16	14563	3832	9197	7281	2427	4854	2912	1456	2184	2427	832	1629
8	29127	7665	18396	14563	4854	9708	5825	2912	4368	4854	1664	3259
4	58254	15330	36792	29127	9709	19418	11650	5825	8737	9709	3328	6518

500 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	Simple	complex	average	simple	complex	average	simple	complex	average
	0.50	1.90	1.20	1.00	3.00	2.00	2.50	5.00	3.75	3.00	8.75	5.88
200	1456	383	919	728	242	485	291	145	218	242	83	162
100	2912	766	1839	1456	485	970	582	291	436	485	166	325
50	5825	1533	3679	2912	970	1941	1165	582	873	970	332	651
25	11650	3066	7358	5825	1941	3883	2330	1165	1747	1941	665	1303
16	18204	4790	11497	9102	3034	6068	3640	1820	2730	3034	1040	2037
8	36408	9581	22994	18204	6068	12136	7281	3640	5460	6068	2080	4074
4	72817	19162	45989	36408	12136	24272	14563	7281	10922	12136	4161	8148

750 GB Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	Simple	complex	average	simple	complex	average	simple	complex	Average
	0.50	1.90	1.20	1.00	3.00	2.00	2.50	5.00	3.75	3.00	8.75	5.88
200	2184	574	1379	1092	364	728	436	218	327	364	124	244
100	4369	1149	2759	2184	728	1456	873	436	654	728	249	488
50	8738	2299	5518	4369	1456	2912	1747	873	1310	1456	499	977
25	17476	4599	11037	8738	2912	5825	3495	1747	2621	2912	998	1955
16	27306	7185	17245	13653	4551	9102	5461	2730	4095	4551	1560	3055
8	54613	14371	34492	27306	9102	18204	10922	5461	8191	9102	3120	6111
4	109226	28743	68984	54613	18204	36408	21845	10922	16383	18204	6241	12222

1T Hard Disk Unit: Hour

Recording Speed (PPS)	PICTURE QUALITY (KB)											
	LOW			MEDIUM			HIGH			BEST		
	simple	complex	average	Simple	complex	average	simple	complex	average	simple	complex	Average
	0.50	1.90	1.20	1.00	3.00	2.00	2.50	5.00	3.75	3.00	8.75	5.88
200	2912	766	1839	1456	485	970	582	291	436	485	166	325
100	5825	1533	3679	2912	970	1941	1165	582	873	970	332	651
50	11650	3066	7358	5825	1941	3883	2330	1165	1747	1941	665	1303
25	23301	6132	14716	11650	3883	7766	4660	2330	3495	3883	1331	2607
16	36408	9581	22994	18204	6068	12136	7281	3640	5460	6068	2080	4074
8	72817	19162	45989	36408	12136	24272	14563	7281	10922	12136	4161	8148
4	145635	38325	91980	72817	24272	48544	29127	14563	21845	24272	8322	16297

* 1 week = 168 hrs/ 1 month = 720 hrs/ 1 year = 8760 hrs
* All the above calculation tables are for reference only. It will vary as per image contents, color etc.

APPENDIX B: HDD COMPATIBLE TABLE

Brand	Model	Capacity	Speed (RPM)
SEAGATE	STM3250820AS	250G	7200 10
	ST3250310SV	250GB	SV35.3
	ST3320620SV	320GB	SV35.2/3
	ST3400620AS	400G	7200 10
	ST3500320SV	500GB	SV35.2/3
	ST3500320AS	500GB	7200 11
	ST3500418AS	500GB	7200 12
	ST3750330SV	750GB	SV35.3
	ST3750640AS	750G	7200 10
	ST3750330AS	750G	7200 11
	ST31000333AS	1000G	7200 11
	ST31000340AS	1000G	7200 11
	ST31000340NS	1000G	Barracuda ES.2
	ST31000340SV	1000G	SV35.3
	ST31500341AS	1.5TB	7200 11
Western Digital	WD2500AAKS	250G	7200 CB
	WD5000AACS	500G	7200 GP
	WD5000AVVS	500G	7200 GP
	WD6400AAKS	640G	7200 BLUE
	WD6400AVVS	640G	7200 GP
	WD7500AACS	750GB	7200 GP
	WD7500AVVS	750GB	7200 GP
	WD10EACS	1000G	7200 GP
	WD10EVVS	1000G	7200 GP
	WD15EADS	1.5TB	7200 GP
HITACHI	HDT725025VLA380	250G	7200
	HDT725032VLA360	320G	7200
	HDP725050GLA360	500G	7200

*** This H.D.D. compatible table is for reference only.**

APPENDIX C: USB DEVICE COMPATIBLE TABLE

Brand	Model	Capacity	Note
Kingston	DataTraveler DT1	4GB	
SanDisk	CRUZER	4GB	CDR 0410VDE ONLY
Transcend	JetFlash V20	4GB	CDR 0410VDE ONLY
	JetFlash V30	2GB	
	JetFlash V30	8GB	

***** This USB device compatible table is for reference only.

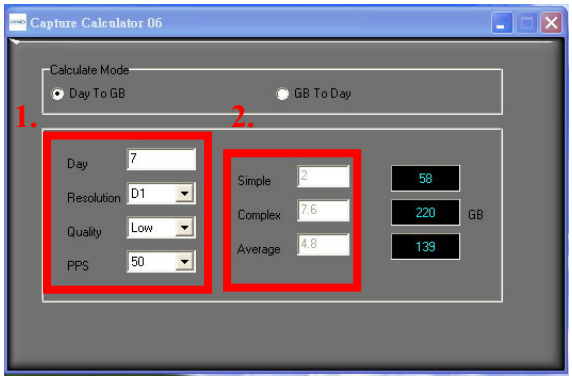
Capture Calculator 06 is a program which separates in “Day to GB” and “GB to Day” two modes.

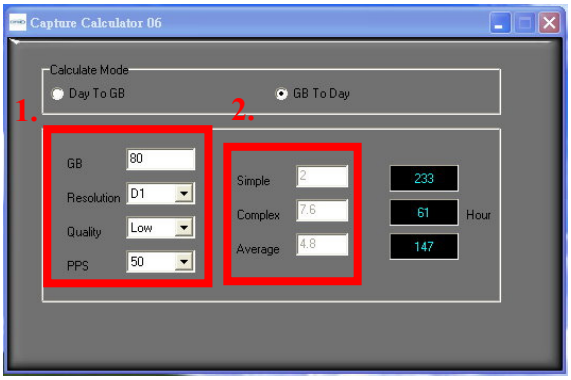
Click

shortcut on the desktop to enable the program.

In “Day To GB” mode, the program will reveal the quantity of the hard disk according to the number of days that inserted. In contrast, the “GB to Day” mode means to insert the quantity of the hard disk and it will get how many hours can be recorded.

Moreover, (1) adjust different parameter such as image “Resolution”, “Quality” and “PPS” will also get different result. In addition, (2) “Simple”, “Complex” and “Average” present the complexity of the image and the number of these three items means the size of the image.





APPENDIX D: MESSAGE LIST

MESSAGE	STATUS & INDICATION	NOTE
DISK ACCESS ERROR!	H.D.D. Data structure Un-normal. Data does not record into DVR or bad sector on DVR H.D.D. Please install another H.D.D. and perform the record again.	
UPDATE FILE ERROR!	Please re-download the update file and update again.	
FIRMWARE UPGRADE FAILED	Please reboot the DVR and upgrade the firmware. Please send the DVR back to repair when DVR is not functioning.	
MEDIA ACCESS FAIL!	The USB file format is incorrect (Please format the pen drive to FAT32) or Pen Drive is setup to ONLY READ mode (Please uncheck ONLY READ mode) when reserve the data by using Pen Drive. The data cannot be burn into CD/DVD disc. Please change another CD/DVD disc and backup the file in CD/DVD disc storage.	
NO FILE!	There is no upgrade file within Pen Drive or the name of upgrade file does not correspond with DVR format. Please adjust the upgrade file name based on the following information. 16CH -> UpdateR.bin 08CH -> Update8.bin 04CH -> Update4.bin	
USB DEVICE NOT FOUND NO USB	Pen Drive undetected. Please Unplug the Pen Drive and plug it again.	
BACKUP START TIME ERROR	Backup start time error.	
BACKUPEND TIME ERROR	Backup end time error.	
DISK ERROR	The data cannot be burn into CD/DVD disc. Please change another CD/DVD disc to backup the file.	
FAN FAILED	Fan Error Warning.	
NO LOG DATA	No Events Record.	
SCHEDULE RECORD	The condition is caused by trying to stop recording when perform the schedule record. Please setup the record to manual mode and then stop the record.	
PLEASE SELECT ONE CAMERA	The message will be shown while using the ZOOM function under split screen condition. Please switch the screen into full screen mode and then operate the ZOOM function.	

APPENDIX E: MOBILE VIEWER USER MANUAL

SYSTEM REQUIREMENTS.

1. STORAGE SPACE : At least 1MB
2. MEMORY：At least 6 MB; suggest 10MB
3. SMART PHONE or PDA：Support Microsoft Windows Mobile or WinCE as following.
    a. Windows Mobile 5
    b. Windows Mobile 6
    c. Windows Mobile 2003 SE
    d. Windows Mobile 2003
    e. WinCE 4.0 or above.

EXECUTING PROGRAM：(MOBILE_VIEWER.exe)

This program need not be installed on the Mobile device. Please save “MOBILE_VIEWER.exe” on SMART PHONE or PDA. Then, click on “MOBILE_VIEWER.exe” on the SMARTPHONE or PDA to execute the program.

QUICK GUIDE on configuration of PDA:

Build in new site:

1. Click “Site”.
2. Click “Manage”.
3. Click “New”
4. Please key in Name, IP, Port, Account, Password, etc.
5. Click “OK”

Build in 3.5G / 3G / GPRS link:

1. Click “Operate”
2. Click “GPRS / 3G”
3. If connection success, H, 3G, or G tag will appear on the top of the screen. (H means 3.5G of HSDPA, 3G means 3G of WCDMA, G means 2.5G of GPRS)

Surveillance:

1. Please build 3G/GPRS link before surveillance via 3.5G/3G/GPRS.
2. Click “site”
3. Select site on the site list.
4. Click “Select”

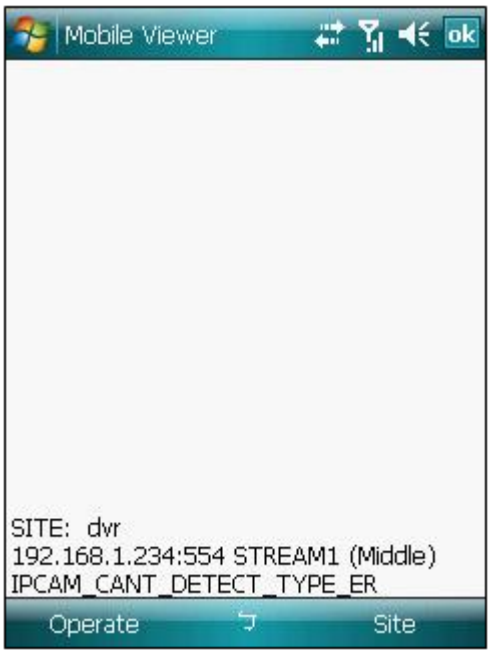
Site Management:

1. Click “Site”
2. Select site on the site list
3. Click “Manage”
4. Edit Name, IP, Port, Account, Password, etc
5. Click “OK”

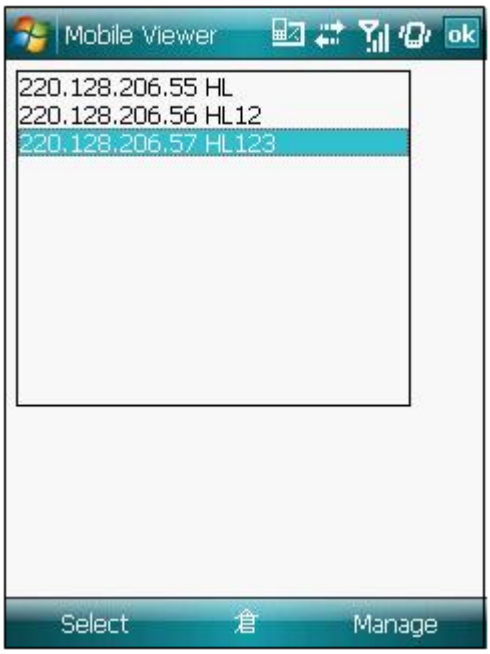
MAIN MENU

There are 3 main menus, including Live View, Site List, and Site Data.

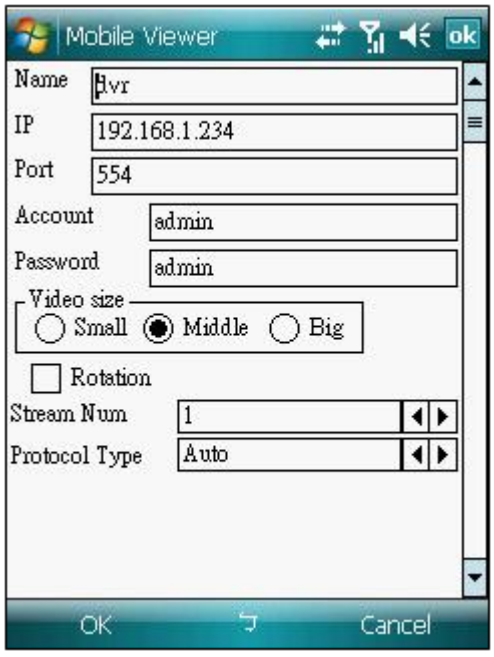
1. Live View (main screen)



2.Site List



3. Site Data

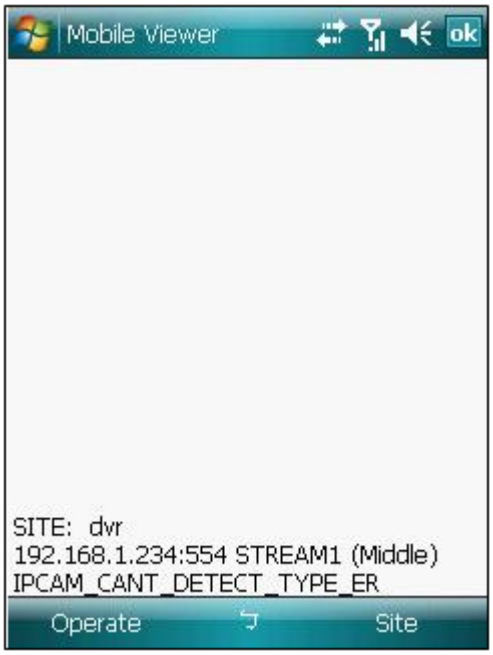


Menu :

In the bottom of each main menu, there are two Submenus.

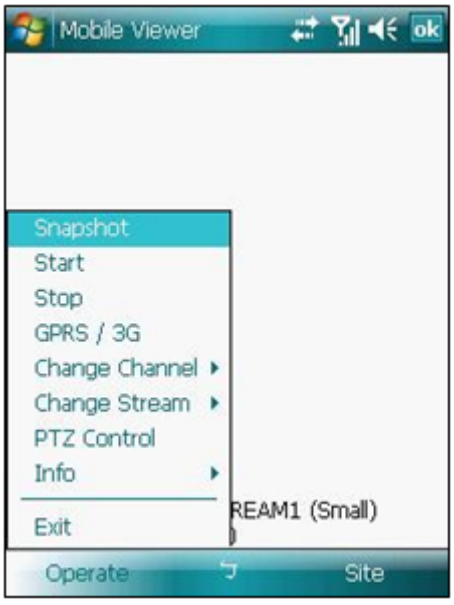
Each main menu can call another submenu or screen.

1. **Live view screen**



Operate : Click on to enter submenu

NOTE: As the smart phone /PDA specifications/resolution may not match with a regular monitor resolution, image may be larger than the screen size of smart phone /PDA, the user can operate navigation key to move the image to different directions to view the whole image or press the central button of navigation key to adjust the image size to the suitable one.



a. **Snapshot** (save the picture as .jpeg files)
b. **Start** (Enable the image transmissions methods, including USB Link, WIFI, Bluetooth, and Infrared).
c. **Stop** (Disable the image transmission methods, including USB Link, WIFI, Bluetooth, and Infrared).
d. **GPRS / 3G** (Enable the image transmission method of GPRS or 3G).
e. **Change Channel** (switch channel).

NOTE: 1. Use "Change Stream" to change the channel.

2. Video Server uses "Change Stream" to switch the channel.

Channel 1 (switch to channel 1)

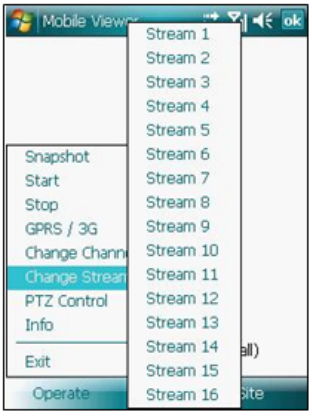
Channel 2 (switch to channel 2)

.

Channel 16 (switch to channel 16)

Channel All (switch to 16 channel format).

f. **Change Stream** (Change channel)



Stream 1 (switch to Stream 1)

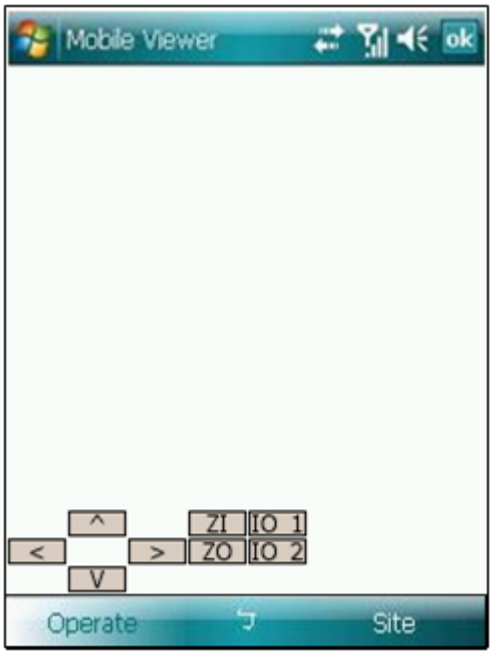
Stream 2 (switch to Stream 2)

:

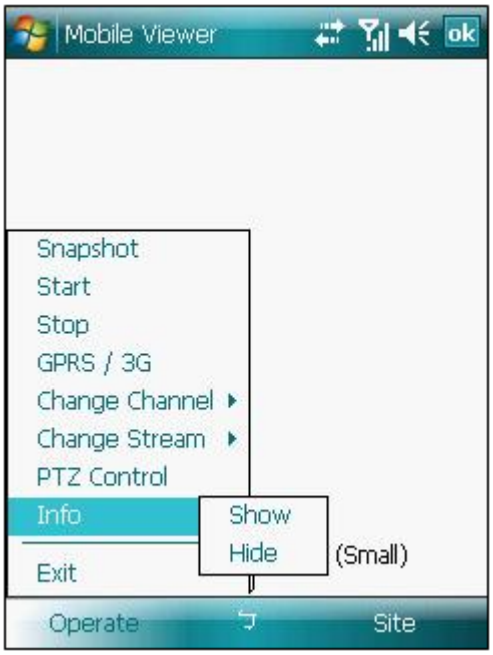
:

Stream 16 (switch to Stream4)

g. **PTZ Control** (Call PTZ control interface)



h. **Info** (Click to show IO control)



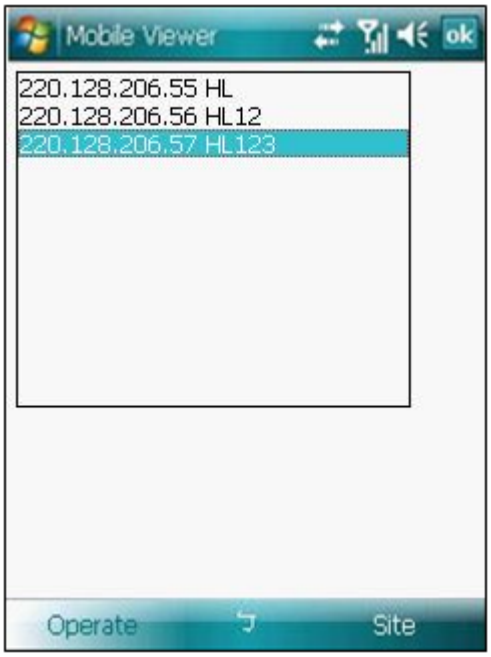
Show (show the information)

Hide (hide the information)

i. **Exit**

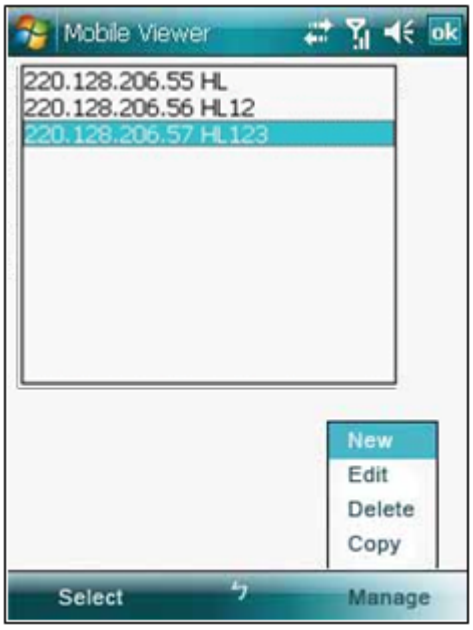
Site(Go to Site List)

2. **Site list screen:**



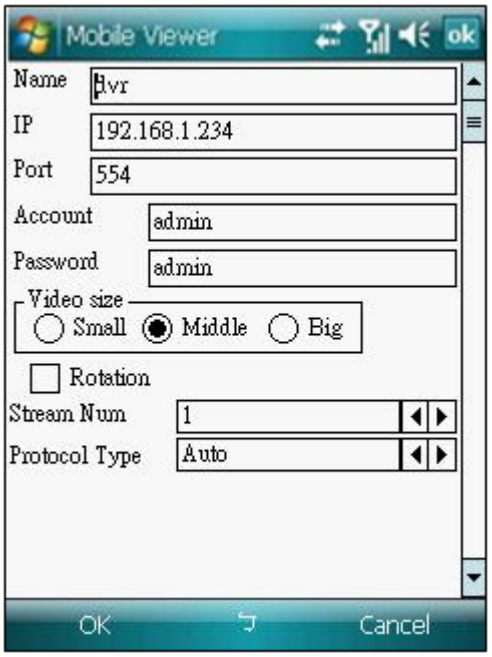
Select (Get back to Live view by click on a selected site).

Manage(Call submenu to configure)



a. **New** (Add a new site and it will switch to “Site Data” menu.
b. **Edit** (Switch to “Site Data”. The user can edit the information).
c. **Delete** (Delete a selected site)
d. **Copy**(Copy a selected site)

3. Site data



OK (Save the information and it will switch to Site List).
Cancel (Switch to Site List without saving the information).

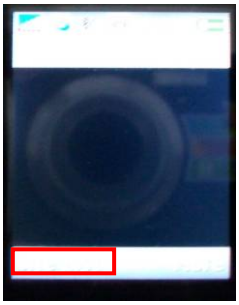
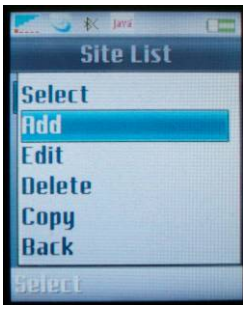
Name: Site Name.
IP: IP Address or Domain Name.
Port: Internet Port.
Account: User Name.
Password: Password.
Video Size: The size of the video.
Rotation: Rotate the video.
Stream Num: In the Multi-Stream device, it is optional to switch the stream number.
Protocol Type: There are different protocol types (Type 1 H-Protocol, Type 2 W-Protocol, Type 3 A-Protocol, Type 4 S-Protocol, Type 5 R-Protocol). The default is Auto.

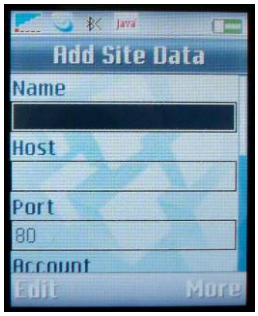
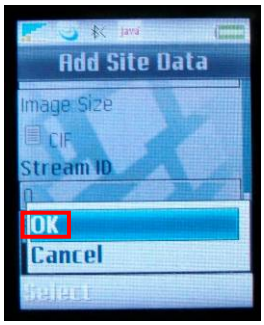
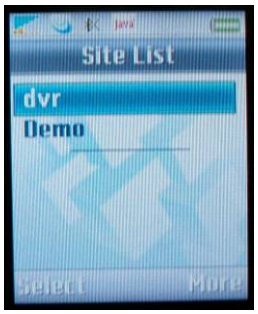
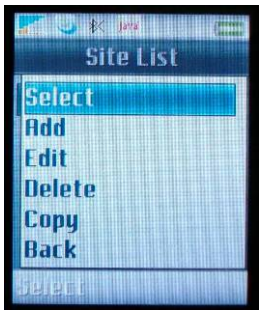
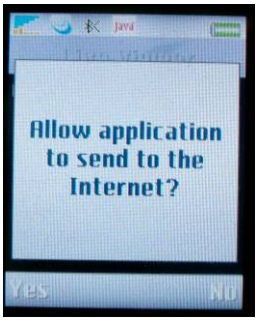
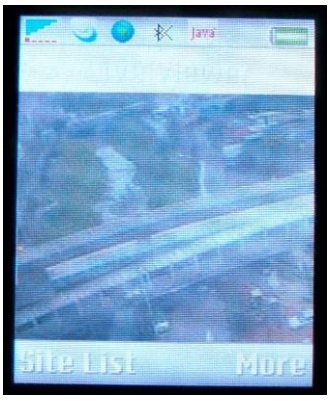
Mobile Surveillance Function List

	Mobile Viewer	3GPP	Mobile J-viewer	iphone
Support cell phone type	Window CE	Symbian	Java	iphone
Communication	RTSP & TCP	RTSP	Http	Http
Player	Mobile Viewer	Built-in Stream player	Mobile Viewer Mobile J-Viewer	Safari

Based on Sony Ericsson K608i

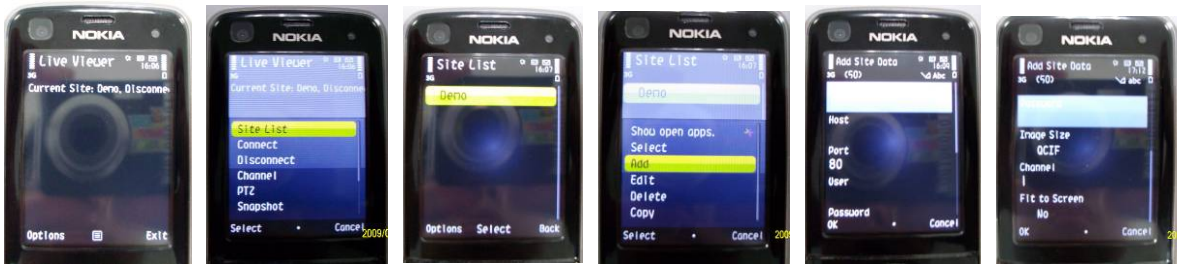
***NOTE: Before carrying out settings, please make sure DVR uploaded with the latest firmware.**

1.	Connect the mobile to PC to download the mobile software. Moreover, select the storage path, such as "Other" within "File manager" in here.	2.	Then, install the mobile software by click "install" and press "Yes" to implement the program immediately.
3.	In addition, use navigation key to open "Applications" and select the Mobile Viewer software to enable the software. *** Normally, the installed software will be setup among "Applications".**	4.	Select "Site List" and press "More" to add new IP-CAM or DVR.(i.e. "Site List" → "More" → "Add ")
			 
5.	Key in all the information about the new add machine. For example, Name : Host: 220.135.151.152 Port: 100 (Default setting is 80, please ensure to change to the DVR or IP-CAM setting) User: admin Password: admin Stream ID : 1.	6.	Finally, click "More" button and select "OK" to save the setting.

			
7.	Select the setup machine and press "More" to select the machine. (i.e. "dvr" → "More" → "Select" in here.)	8.	Press "More" and select "Connect". Finally, click "Yes" to allow the application to send to the internet.
	 		
9.	Success with vivid image.		
			

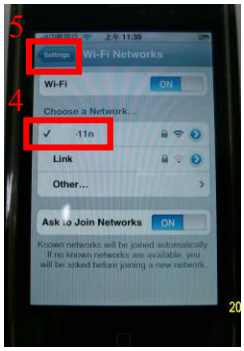
Based on Nokia 6220C (OS- Symbian S60 3rd Edition)

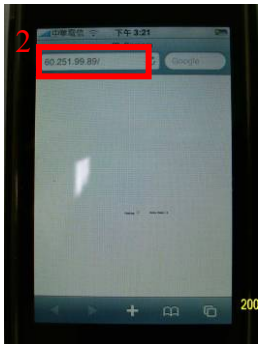
***NOTE: Before carrying out settings, please make sure DVR uploaded with the latest firmware.**

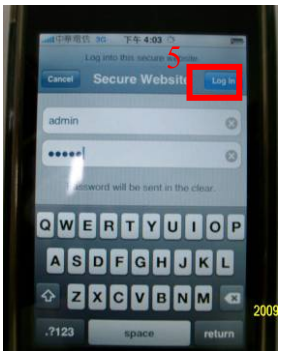
1.	Connect the mobile to PC to download the mobile software. Moreover, select the storage path. (i.e. “Menu” → “Settings” → “Data mgr.” → “File manager” → “Other”)
2.	Use navigation key to open “Applications” and select the Mobile Viewer software to enable the software. (i.e. “Menu” → “Applications” → “My own” → “Mobile Viewer”)
3.	Key in all the information about the new add machine. (i.e. “Options” → “Site List” → “Options” → “Add”) Name : Host: 220.135.151.152 Port: 100 (Default setting is 80, please ensure to change to the DVR or IP-CAM setting) User: admin Password: admin Channel : 1. Click “OK” to save the setting.
	

4.	Select the setup machine and click “Connect”.
5.	Select “Yes” to allow application mobile viewer to use the internet. Finally, Success with vivid image.

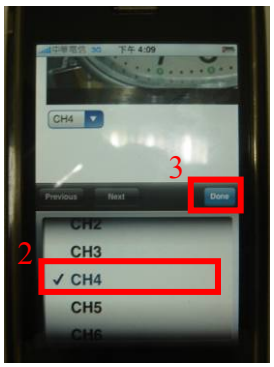
Based on iPhone

1.	Before using iPhone to monitor the live view of DVR or IP-CAM, please confirm iPhone can connect to the Internet or Wi-Fi. (“Home” Button → “Settings” → “Wi-Fi” → Choose a Network → “Settings” → “Home” Button) * Via Internet can connect to DVR or IP-CAM which under the WAN. * Via Wi-Fi can connect to DVR or IP-CAM which under the LAN or WAN (while wireless AP connected to WAN).
	
2.	Fill in the IP address, username and password of the IP-CAM or DVR which wants to connect. Finally, success with vivid image. (i.e. “Safari” → “URL” → Fill in the IP address → “GO” → “Log in”) * DVR (i.e. http://220.135.151.152:100/ iphone.html) * IP-CAM (i.e. http://60.251.99.89:80/) * Please ensure all the settings are the same as DVR or IP-CAM setting





3.	Moreover, while the user wants to change the DVR channel, please follow by the following steps. (i.e. "CH1 ▼ "button → Select the channel → "Done")



*Note: Above information is for reference only. For other mobile device settings, please refer to mobile device specifications and seek advice from manufacturer before carrying out settings.

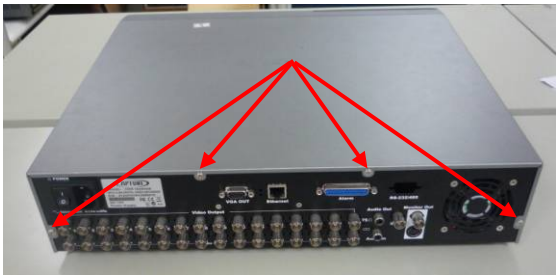
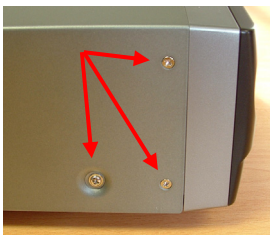
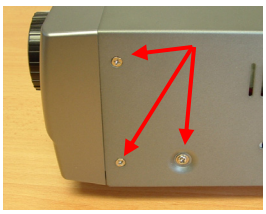
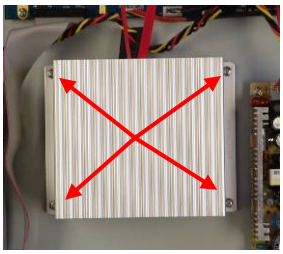
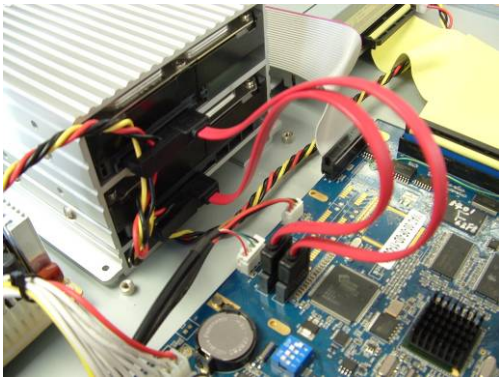
Supported/Tested Mobile List:

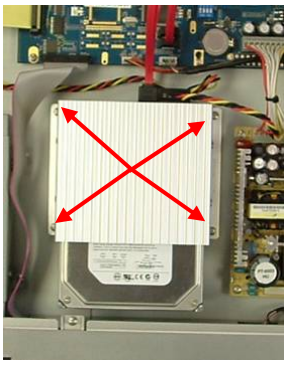
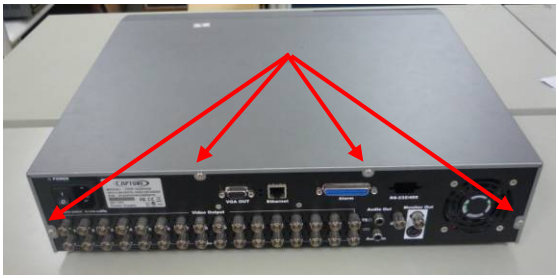
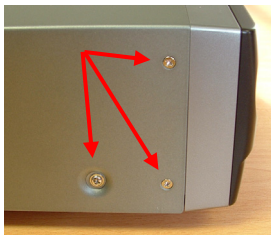
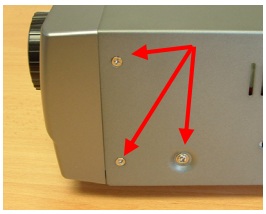
Mobile Brand	Model
BlackBerry	Bold 9000, Curve 8310, Storm
Dopod	CHT9100,
IPhone	IPhone
LG	KS-20
Nokia	3250, 5800 EXPRESS MUSIC, 6220 (6220C), 6680(6681), 8500, E71, N70, N72, N93, N95
Sony Ericsson	G900, K530i, K608i, W810, W902, W910i, Z770

APPENDIX F: HDD INSTALLATION GUIDE

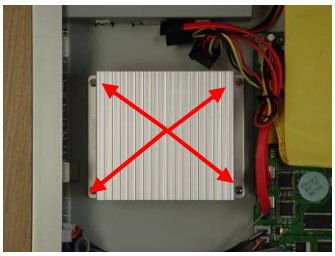
WARNING: The end user should NOT attempt to install/change the hard disks. Please consult your distributor/installer.

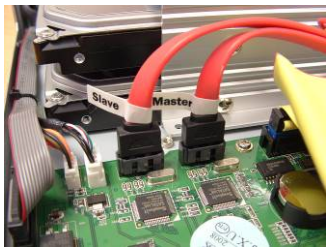
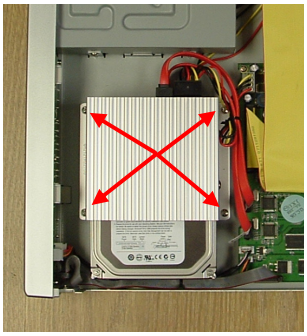
CDR 1620VDE / CDR 0820VDE

1	Remove the top cover by unscrewing 4 screws located at the rear and 3 located on both sides.		
			
2	Remove the 4 mountings screws to the HDD holder		
			
3	Insert HDD(s) and tighten using the 4 HDD screws (not supplied)		
4	Connect the power and data cable (s).		
		Data Cable Socket ID: Single HDD: Use any socket Twin HDD: Socket near to drives identified as HDD 1 Socket further to drives identified as HDD 2	

5	Refit the HDD holder by aligning the mount hole and screwing down firmly
	
6	Refit the top cover and screwing back the 4 screws located at the rear and 3 located on both sides.
	  

CDR 0410VDE

1	Remove the top cover by unscrewing 3 screws located at the rear and 1 located on both sides.
2	Remove the 4 mountings screws holding down the HDD holder
	
3	Insert HDD(s) and tighten using the 4 HDD screws (not supplied)

4	Connect the power and data cable(s).
	Data Cable Socket ID: As Labeled 
5	Refit the HDD holder by aligning the mount hole and screwing down firmly
	
6	Refit the top cover and screwing back the 3 screws located at the rear and 1 located on both sides.

CDR 0410VE

1	Remove the top cover by unscrewing 3 screws located at the rear and 1 located on both sides.
2	Screw HDD and tighten up by using the 4 HDD screws

3	Connect the power and data cable(s).
4	Refit the top cover and screwing back the 3 screws located at the rear and 1 located on both sides.

APPENDIX G: ACCESSORY PACKAGE DETAILS

1. Quick Installation Guide
2. Utility CD
3. Optical Mouse
4. Remote Controller
5. DC Power Pack (Applicable for CDR 0410VE/ CDR 0410VDE Only)
6. Ext Boards for Alarm / RS232/485 (Applicable for CDR 0820VDE/ CDR 1620VDE Only)
7. Plug Adaptor / Screw Kit
8. Mains Power Lead
9. Rack mount L-Brackets (x2)
10. Manual